

## **Environmental Protection Department**

**Permits and Regulatory Affairs Division** 

LLNL-AR-411431-10-3

# Lawrence Livermore National Laboratory (LLNL) Experimental Test Site (Site 300) Compliance Monitoring Report for Waste Discharge Requirements (WDR) Order No. R5-2008-0148

Annual/Second Semester Report 2009

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Date

LLNL Site 300 Compliance Monitoring Report for WDR Order No. R5-2008-0148
Annual/Second Semester Report 2009

## Certification

I certify that the work presented in this report was performed under my supervision. To the best of my knowledge, the data contained herein are true and accurate, and the work was performed in accordance with professional standards.



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California Professional Geologist

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License expires: July 31, 2010

#### **List of Abbreviations and Acronyms**

3CMP samples collected at Site 300 for Compliance Monitoring Program

3EMG samples collected at Site 300 for the Permits and Regulatory Affairs Division

3GIV samples collected at Site 300 for site investigations

3VES three casing volumes purged using an electric submersible pump

BCLABS-BAK BC Laboratories, Inc. in Bakersfield, CA

BOD Biochemical oxygen demand

CERCLA Comprehensive Environmental Response, Compensation and Liability Act

CMP Compliance Monitoring Program (conducted under CERCLA)

CMR Compliance Monitoring Report (prepared under CERCLA)

CoC (or COC) chain-of-custody form

CVRWQCB Central Valley Regional Water Quality Control Board

DO dissolved oxygen

DSWP sewage percolation pond influent sampling location

DTW depth to (ground) water

EC electrical conductivity, or specific conductance (SC)
ESWP sampling location within sewage evaporation pond

GF Grundfos pump

FRUITGROWL FGL Environmental Laboratories in Stockton, CA

ft feet

gal gallons

gpm gallons per minute (measurement of flow)

GWE Ground water elevation (above mean sea level)

HSU hydrostratigraphic unit
ID identification number

ISWP sewage evaporation pond influent sampling location

LLNL Lawrence Livermore National Laboratory

MCL maximum contaminant level (for drinking water)

mL milliliters

## List of Abbreviations and Acronyms (Continued)

MPN	most probable number
MRP	monitoring and reporting program
mV	millivolts (measure of oxidation-reduction potential)
NA	not applicable
ND	none detected, or not detected
$NO_3$	nitrate
NR	analysis not required by Permit at this sampling location
pН	measure of the acidity or alkalinity of a solution
OG	off gassing measured by scale of 1-5, 5 being high amounts of off gassing
OU	Operable Unit under CERCLA
Q	flow rate, or number of well volumes purged (according to context)
Qal	Quaternary Age alluvial deposits
QC	quality control
Qt	Quaternary Age terrace deposits
SC	specific conductance, or electrical conductivity (same as EC)
SHO	short analytical holding time (such as samples for coliform bacteria analyses)
VOA	samples collected for analysis of volatile organic compounds
WDR	waste discharge requirements (Permit)

## **Executive Summary**

Under authority of the State of California, and required by the Porter-Cologne Water Quality Control Act, the Central Valley Regional Water Quality Control Board (CVRWQCB) issued Order No. R5-2008-0148 for the Experimental Test Site (Site 300), to Lawrence Livermore National Laboratory (LLNL). Monitoring and Reporting Program (MRP) Number R5-2008-0148 was adopted in September 2008, replacing MRP 96-248. Under the terms of this MRP, LLNL submits semiannual and annual monitoring reports detailing its Site 300 discharges of domestic and wastewater effluent to sewage evaporation and percolation ponds in the General Services Area, septic systems located throughout the Site, cooling tower blow down to percolation pits and septic systems, and mechanical equipment discharges to percolation pits.

This report contains the elements required by Waste Discharge Requirement (WDR) Order R5-2008-0148 for the 2009 annual report and updates the status of equipment and facilities since the adoption of R5-2008-0148. This is the third report prepared under this WDR since Order R5-2008-0148 replaced WDR Order 96-248 in September 2008. All permit conditions were met, except for missing third and fourth quarter percolation pit inspections at Building 806. This occurred due to a scheduling error, which as been corrected. Compliance certification accompanies this report, as required by Federal and State regulations.

#### 1. Introduction

Required monitoring for specific Lawrence Livermore National Laboratory (LLNL) Site 300 monitoring networks is defined in the Monitoring and Reporting Program (MRP) Order Number R5-2008-0148, which was adopted in September 2008, replacing MRP 96-248. LLNL implemented the elements of MRP R5-2008-0148 beginning with the fourth quarter of 2008. Applicable reporting requirements are found in the Standard Provisions and Reporting Requirements specified in the Waste Discharge Requirements (WDR) Order R5-2008-0148 (CVRWQCB, 2008) permit and in the MRP R5-2008-0148.

MRP R5-2008-0148 was revised by letter issued November 23, 2009 (Timm, 2009). The revised MRP will be implemented in the first semester 2010.

This report provides an annual summary of monitoring conducted during the first and second semesters of 2009 under the originally issued MRP R5-2008-0148.

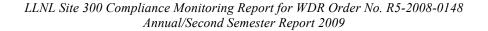
This report satisfies the 2009 first and second semester monitoring and reporting requirements of WDR R5-2008-0148 (CVRWQCB, 2008). It details the monitoring results of the five compliance networks and inspection logs of the percolation pit systems associated with the mechanical equipment and cooling tower discharges.

Compliance monitoring networks discussed in the report include:

- Sewage evaporation and percolation ponds Wastewater and ground water monitoring (Sections 2.1 through 2.5)
- Septic system ground water monitoring (Sections 3.1 through 3.3)
- Percolation pit inspections (Section 4.1)
- Cooling tower blow down discharge monitoring (Sections 5.1 through 5.3)
- Mechanical equipment effluent discharge monitoring (Sections 6.1 through 6.3)
- Status of special studies

BC Laboratories, Inc. and FGL Environmental Laboratory provided off-site analytical support for the monitoring networks.

Site 300, operated by Lawrence Livermore National Security, LLC, is located in the Altamont Hills approximately 10.5 kilometers (6.5 miles) southwest of downtown Tracy, California. **Figure 1** shows the locations of the wastewater systems permitted under WDR R5-2008-0148, including mechanical equipment percolation pits, septic systems, and the sewage oxidation and percolation ponds (sewage ponds) located in the General Services Area. None of the permitted mechanical equipment percolation pits overflowed during this monitoring period, nor were there any detected impacts to ground water around the sewage ponds. Discharges from cooling towers and mechanical equipment were consistent with historic information provided in the Report of Waste Discharge submitted for the renewal of WDR 96-248.



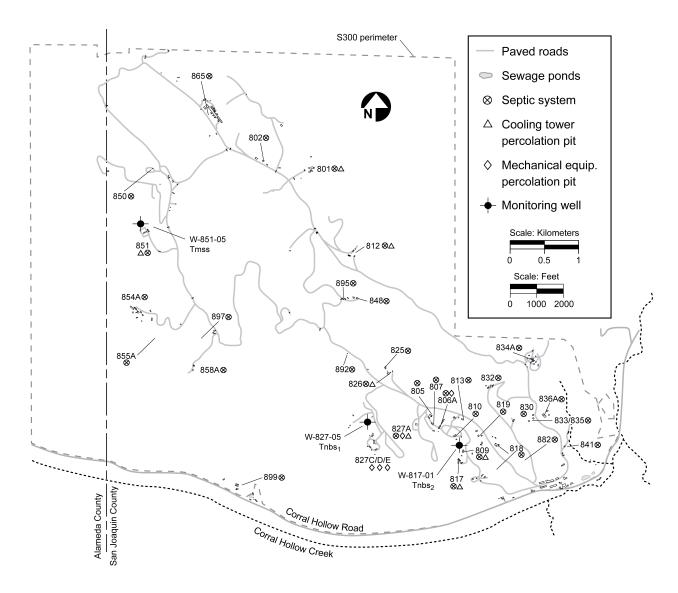


Figure 1. Locations of Site 300 facilities with septic systems and percolation pits.

## 2. Sewage Evaporation and Percolation Ponds

#### 2.1. Effluent and Pond Compliance Monitoring Program

MRP R5-2008-0148 requires semi-annual samples be collected of wastewater flowing into the sewage evaporation pond (sewage pond) for analysis. Sample collection is by grab sampling from a location west of the sewage pond (see sampling location ISWP in **Appendix A**, **Figure A.1** showing the Site 300 sewage evaporation and percolation ponds and ground water and wastewater compliance monitoring locations.) Location ISWP is a manhole that captures all waste streams before they flow into the sewage pond. The samples are analyzed for specific conductance (SC, also commonly known as electrical conductivity), pH, and biochemical oxygen demand (BOD).

MRP R5-2008-0148 also requires samples be collected of wastewater within the sewage pond and wastewater discharging into the sewage percolation pond. Semiannual wastewater samples are collected by grab sampling from a dock at the eastern end of the sewage pond (sampling location ESWP) and analyzed for SC, pH, metals, dissolved oxygen (DO), BOD, and total and fecal coliform. Any discharge from the sewage pond to the sewage percolation pond (sampling location DSWP) is grab sampled and analyzed for the same constituents. Permit WDR R5-2008-0148 requires LLNL to operate the sewage pond with adequate freeboard to minimize the frequency of discharges to the sewage percolation pond. No discharges occurred to the sewage percolation pond during 2009.

Observations of the sewage pond are made and recorded at least monthly for freeboard, color, odor, and levee condition. **Appendix A** contains the 2009 second semester field observation logs for the sewage pond. Some animal burrows were observed in the levee from time to time. These burrows continue to be monitored by operations personnel to ensure that the integrity of the levee is not compromised.

Leak detection and monitoring compliance at the sewage evaporation and percolation ponds is accomplished by monitoring the shallow ground water beneath and adjacent to the ponds. Ground water monitoring includes semiannual sampling during the first and second semesters when ground water levels are the highest and lowest and analysis of the collected samples for SC, pH, total and fecal coliform, chloride, nitrate, sulfate, total dissolved solids, sodium, and metals. In addition, ground water elevations are routinely recorded and contoured (**Appendix A**, **Figure A.2**). A map showing the locations of the monitor wells (**Appendix A**, **Figure A.1**) with respect to the ponds, and tables of ground water specifications and elevations for each well (**Appendix A**, **Tables A.1 and A.2**) are provided.

## 2.2. Sewage Pond Wastewater Sampling and Analysis

For the sewage pond wastewater sampling and analysis, calibration is performed on DO, SC, and pH meters less than 12 hours before sampling. DO, SC, pH, and temperatures of the samples are measured and written on the field tracking forms (field logs) when the grab samples from ISWP, ESWP, and DSWP are collected. Chain-of-custody (CoC) forms are filled out appropriately and signed by the sampler for each analytical laboratory to which the samples are transferred; CoC numbers are also written on the field logs. Analytical methods used are appropriate

EPA-approved Methods (U.S. Environmental Protection Agency, 2005) or Standard Methods (Clesceri et al., 1998).

The samples required under MRP R5-2008-0148 for locations ISWP and ESWP were collected during the first semester on May 13, 2009 and during the second semester, on October 8, 2009. Wastewater samples are collected, analyzed, and results entered into the Environmental Protection Department's database according to a complete set of written protocols documented in the LLNL Environmental Protection Department's Environmental Monitoring Plan (Woods, 2005).

## 2.3. Sewage Pond Wastewater Monitoring Results

Results are summarized here for samples collected during the monitoring period as required under MRP R5-2008-0148. Monitoring data are found in **Appendix A**. Coliform, anions, and physical characteristic data summaries are presented in **Table A.3**. A metal data summary for the location ESWP is found in **Table A.4**. **Table A.5** provides a duplicate (QA) sampling data summary for the sewage pond's wastewater monitoring network. All results and observations were in compliance with the Permit's discharge specifications. Adequate free board was provided to prevent any over-topping or erosion of the pond embankment. Field tracking forms are in **Appendix A**, which also contains the field logs, including field measurements. The CoCs and laboratory analytical results are stored at LLNL and are available upon request. Five-year historical plots for monitoring data and tabular summaries are included in Appendix A.

## 2.4. Ground Water Sampling and Analysis

Semiannual sampling of ground water from wells at the sewage evaporation and percolation ponds was performed during the second semester of 2009. Ground water samples were collected and analyzed, and results entered into the Environmental Protection Department's database according to written protocol (Goodrich and Lorega, 2009). The monitor wells were purged and sampled on two occasions, from August 10 to August 13, and from November 4 to November 12, 2009, according to prescribed methods assigned to each monitor well. In addition, well W-35A-04 was sampled December 16 and 17, 2009, later than other wells due to pump repair. Information regarding the conditions during sampling, as well as field measurements taken at the time of sampling, is found in the ground water sampling data sheets located in **Appendix A**. The collected samples were transferred to an offsite analytical laboratory for physical parameters and analyses listed in Section 2.1. Following the initial sampling event, each well was treated with a pre-calculated dose of chlorine and pumped to circulate the chlorine throughout the water column. On the following day, wells were tested for residual chlorine and samples collected to be analyzed for total and fecal coliform bacteria at an offsite analytical laboratory. Wells that tested positive for chlorine were pumped until chlorine was not detected prior to sampling, according to the aforementioned written protocols.

As reported in the last semiannual report (September 2009), LLNL removed the ground water monitoring well W-26R-03 from this network during the first semester because the well serves as an idle extraction well for the Eastern General Services Area ground water remediation network. Though this well is currently not in use, if monitoring indicates a need to reinitiate treatment in this area, the well would again be used as an extraction well and, therefore, is not appropriate to be used as part of the sewage pond ground water compliance monitoring network. Well

W-25N-22 was added to this network as an appropriate replacement well and was sampled during this reporting period.

#### 2.5. Ground Water Monitoring Results

All monitored parameters were in compliance with the Permit limits; ground water data are presented in Tables found in **Appendix A**. Anion data are listed in **Table A.6**. Coliform data are found in **Table A.7**. **Table A.8** provides a summary of physical chemistry data and **Table A.9** lists metals data. QA data summaries for the monitoring network are located in **Table A.10**. During the second semester, coliform bacteria (**Table A.7**) were detected over the reporting limit in three monitoring wells: W-25N-20, a down-gradient well (4.0 MPN/100mL), W-26R-11, a well down-gradient from the sewage pond but up-gradient from the percolation pond (4.0 MPN/100mL), and W-35A-04, a cross-gradient well (23 MPN/100mL). However, the absence of fecal coliform indicates the septic system is probably not the source of the detected coliform.

Appendix A, Figure A.2 contains the ground water elevation contour map for the most shallow ground water zones (Hydrostratigraphic Units [HSUs]) in the sewage evaporation and percolation ponds area. These maps were produced for the LLNL activities conducted under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) for the Compliance Monitoring Program (CMP) and reflect ground water elevation levels from May 5-14, 2009. The sewer pond ground water network map showing concentrations of nitrates is presented in Appendix A, Figure A.3. Figure A.3 also provides data tables for nitrates and other monitored constituents to assist the reader in evaluating the data presented in this report. Historical plots for 5-year ground water monitoring data are provided in Appendix A. The CoCs and laboratory analytical results are archived at LLNL and are available upon request.

## 3. Septic System Ground Water Monitoring

## 3.1. Septic System Ground Water Compliance Monitoring Program

Monitoring required for the septic systems is specified in the MRP R5-2008-0148. LLNL implemented the elements of MRP R5-2008-0148 for four septic systems beginning in the fourth quarter 2008. Applicable reporting requirements are found in the MRP and Standard Provisions and Reporting Requirements for WDR R5-2008-0148 (CVRWQCB, 2008).

Since the adoption of the revised permit, LLNL has ceased operations at Buildings 850 and 812. LLNL is in the process of formally closing the septic system at Building 850 following a plan submitted to the CVRWQCB on May 15, 2009, and approved August 11, 2009. Though operations at Building 812 have ceased, the septic system has not been closed pending final determination of the future use of the facility. In addition, several other buildings with septic systems identified in the permit are currently inactive. They were identified in the permit since the septic systems have not be closed pending determinations of whether the facilities will be reactivated in the future or ultimately identified for demolition. Facilities that currently have no active operations include Buildings 802, 812, 830, 848, 850, 854, and 865.

MRP R5-2008-0148 requires semiannual samples be collected from ground water monitoring wells up and down gradient from septic systems located at Buildings 812, 834, 850, and 899.

The locations of each of these Buildings are shown in **Appendix B. Figures B.1**, **B.2**, **B.3**, and **B.4** present the monitoring networks for Buildings 812, 834, 850, and 899, respectively.

Well specifications for all the septic system ground water monitoring wells are found in **Appendix B, Table B.1**.

At Building 812, the ground water travels in a southwest direction to the west of the 812 Canyon Fault line and in a southeast direction to the east of the fault line (**Appendix B, Figure B.1**). Well W-812-1929 is identified as an up-gradient well while W-812-07 and W-812-09 are down gradient wells.

At Building 834, ground water travels in a southward direction (**Appendix B, Figure B.2**). Well W-834-D17 is identified as the up-gradient well, and wells W-834-S1 and W-834-S4 are identified as down-gradient wells.

At Building 850, ground water travels in an eastern direction (**Appendix B, Figure B.3**). Well W-850-2416 is up-gradient of the septic system, and wells NC7-61 and NC7-10 are downgradient.

At Building 899, ground water travels in a southeastern direction (**Appendix B, Figure B.4**). Well K6-17 is identified as an up-gradient monitoring well. Well K6-23 is the closest well to the septic system. Currently, there is no well located down-gradient of the septic system and leach field at Building 899.

#### 3.2. Septic System Ground Water Sampling and Analysis

Second semester 2009 samples of ground water from wells within the septic system monitoring network were collected during the third quarter of 2009. Ground water samples were collected and analyzed, and results entered into the Environmental Protection Department's database according to a complete set of written protocols (Goodrich and Lorega, 2009). The monitoring wells were purged and sampled in the first semester (January 21 through February 11, 2009) and also in the second semester (August 4 and 5, 2009). First semester data was provided in the first semester report. Sampling was according to prescribed methods assigned to each monitor well except for samples collected for total and fecal coliform.

Sampling procedures require that the well be treated with a pre-calculated dose of chlorine 24 hours prior to collecting coliform samples. However, since many of the monitoring wells in this network are wells that are used as CERCLA extraction or injection wells, chlorinating the wells was not appropriate. Adding chlorine to the well has the potential of negatively impacting ongoing CERCLA remediation activities. Therefore, no wells within the septic system ground water monitoring network were treated with chlorine prior to collecting samples for coliform analysis. Not chlorinating the wells before the samples were collected could result in coliform detections characteristic of what was in the standing water column within the well but not associated with the ground water quality. To remedy this situation in the future, LLNL recommended an alternate set of wells be used during future semiannual sample events. The alternate wells were discussed in the last semester report.

The collected samples were transferred to an offsite analytical laboratory for physical parameters and analyses of the constituents listed in **Appendix B**, **Figures B.1**, **B.2**, **B.3**, and **B.4**.

#### 3.3. Septic System Ground Water Monitoring Results

Second semester data for each well within this monitoring network is presented in **Appendix B**. **Figures B.1**, **B.2**, **B.3**, and **B.4** present second semester sampling results for total and fecal coliform, nitrate, ground water elevations, and ground water elevation contour maps for the most shallow ground water zones HSUs.

First semester 2009 monitoring data showed nitrate results (originally provided in Figures B.5, B.6, B.7, and B.8 in the First Semester 2009 Report, dated September 1, 2009). Nitrate concentrations in the Building 834, 850, and 899 ground water monitoring networks were detected above the drinking water maximum contaminant limit (MCL; 45 mg/L). Both downgradient wells at Building 834 were above the MCL (W-834-S1 at 94 mg/L and W-834-S4 at 160 mg/L). The up-gradient well location W-834-D17 was reported dry. Nitrate exceeded the drinking water MCL in down-gradient wells from the Building 850 septic system (W-NC7-10 at 48 mg/L; W-NC7-61 at 66 mg/L). The well up-gradient from the Building 850 septic system had a nitrate concentration below the detection limit (W-850-2416 at <0.5 mg/L). Nitrate concentrations also exceeded the drinking water MCL in the down-gradient well of the Building 899 septic system (K6-23 at 170 mg/L). The well up-gradient from the Building 899 septic system had a nitrate concentration below the detection limit (K6-17 at <0.5 mg/L). Total coliform from was detected at the reporting limit of 2.0 MPN/100mL in well locations W-850-2416 (up-gradient well) and NC7-10 (down-gradient well) of the Building 850 septic system monitoring network (Appendix B, Figure B.6 of the First Semester 2009 Report).

Second semester 2009 monitoring data showed nitrate results (provided in Figures B.1, B.2, B.3, and B.4) for all four septic-system monitoring networks. Nitrate concentrations in the Building 834, 850, and 899 ground water monitoring networks were detected above the drinking water maximum contaminant limit (MCL; 45 mg/L). Both down-gradient wells at Building 834 were above the MCL (W-834-S1 at 110 mg/L and W-834-S4 at 170 mg/L). The up-gradient well location, W-834-D17, was reported dry. Nitrate exceeded the drinking water MCL in downgradient wells from the Building 850 septic system (W-NC7-10 at 59 mg/L; W-NC7-61 at 65 mg/L). The well up-gradient from the Building 850 septic system was not sampled due to construction related to CERCLA removal action. Nitrate concentrations also exceeded the drinking water MCL in the closest well to the Building 899 septic system (K6-23 at 180 mg/L). The well up-gradient from the Building 899 septic system had a nitrate concentration below the detection limit (K6-17 at <0.5 mg/L). Total coliform was detected at 4.0 MPN/100mL in well location K6-17 (up-gradient well) of the Building 899 septic system monitoring network (Appendix B, Figure B.4). This well was not chlorinated during sampling. Without chlorinating the well prior to collecting samples, it is not possible to determine if the coliform identified in these samples was a result of contamination within the well or from coliform detected in the ground water. However, the absence of fecal coliform indicates the septic system is probably not the source of the detected coliform.

**Figure B.1** is the ground water elevation contour map for Building 812 ground water in the Tnsc<sub>0</sub> and Tnbs<sub>1</sub>/Tnbs<sub>0</sub> HSU ground water elevation contours. **Figure B.3** presents the ground water elevation contour map for the Building 850 Qal/WBR HSU. **Figure B.2** presents the ground water elevation contours around Building 834 in the Tpsg perched water-bearing zone. **Figure B.4** presents the ground water elevation contours around Building 899 for the Qt-Tnsb<sub>1</sub>

HSU. These figures are based on maps produced for the LLNL activities conducted under the CERCLA for the First Semester 2008 Compliance Monitoring Report (CMR, September 30, 2008), and the Building 812 Feasibility Study.

In addition, copies of the second semester ground water sampling data logs, which note well conditions and the sample data, as well as field measurements, are also included in **Appendix B**. The CoCs and laboratory analytical results are archived at LLNL and are available upon request. Data from duplicate sampling is not available for this monitoring period.

## 4. Percolation Pit Inspections

#### 4.1. Percolation Pit Compliance Inspection Program

LLNL implemented first semester 2009 visual inspections of the mechanical equipment and cooling tower percolation pits for the identified locations, which collect effluent from the mechanical equipment facilities and cooling towers as specified in MRP R5-2008-0148.

#### 4.1.1. Quarterly Inspections of Mechanical Equipment Percolation Pits

MRP R5-2008-0148 requires quarterly inspections of the five mechanical equipment percolation pits located at Buildings 806A, 827A, 827C, 827D, and 827E (**Appendix E, Figure E.1**). If standing water is visible during the inspection, the inspection frequency for the percolation pit with the standing water is increased to monthly until no standing water is visible. During the first semester, one inspection of each of the five mechanical equipment percolation pits was completed. The Building 806 and 827 percolation pit inspections were performed during the first semester (January 12 through May 27), and the second semester (August 12 through December 16). **Appendix C** contains the second semester 2009 mechanical equipment and percolation pit inspection checklists.

Inspections are also a component of the mechanical equipment discharge monitoring program, and are discussed in Section 4 of this report. Inspection forms for the first two quarterly inspections at Building 806 and all four quarterly inspections at Buildings 827A, 827C, 827D, and 827E are presented in **Appendix C**, with a description of the inspection process under Section 4.1.1, Quarterly Inspections of Mechanical Equipment Percolation Pits. During the third and fourth quarters of 2009, inspections at the Building 806 mechanical equipment percolation pits were inadvertently not performed. Due to a communication error, these inspections were not scheduled and LLNL has taken steps to ensure future inspections are performed as specified in the MRP.

#### 4.1.2. Quarterly Inspections of Cooling Tower Percolation Pits

MRP R5-2008-0148 requires quarterly visual inspections of the cooling towers discharging to percolation pits located at Buildings 801, 809, 812, 817A, 826, 827A, and 851 (**Appendix D**, **Figure D.1**). If standing water is present, the MRP requires the inspection frequency to be increased to monthly until standing water is no longer visible. Visual inspections are conducted to verify the percolation pits are working properly and do not have the potential to overflow. During the first semester of 2009, inspections were conducted on January 28 and April 21 and 22. Third quarter inspections occurred July 27. Seven fourth quarter inspections occurred October through December. The inspection forms are provided in **Appendix C**. All inspections

demonstrate there was no standing water in the percolation pits. Copies of the inspection forms are found in **Appendix C**.

Inspections were not conducted for the cooling towers located at Building 812 and 850 during the second semester, as these facilities are no longer operational and the cooling towers have been taken out of service

## 5. Cooling Tower Blow Down

#### 5.1. Effluent and Pond Compliance Monitoring Program

Monitoring required for the cooling tower blow down is specified in MRP R5-2008-0148. LLNL implemented the cooling tower blow down monitoring starting the fourth quarter of 2008. Applicable reporting requirements are found in the Standard Provisions and Reporting Requirements of WDR R5-2008-0148 and the MRP.

Cooling towers located at Site 300 discharge either into percolation pits or into septic systems. Currently, there are eight operating cooling towers. The cooling tower located at Building 812 wad taken out of service and had no discharges during the second semester of 2009. The cooling tower locations are identified in **Appendix D, Figure D.1**. The cooling tower located at Building 825 discharges to a septic system. The remaining cooling towers located at Buildings 801, 809, 817, 826, 827, and 851 all discharge to percolation pits. The two cooling towers located at Building 851 were replaced in the second semester with a single new cooling tower. The two cooling towers located at Building 827 have blended cooling water and a combined discharge line and therefore only one sample was collected to characterize the discharge of these cooling towers.

MRP R5-2008-0148 requires semi-annual sampling of the cooling tower blow down. Grab samples are collected from the water circulating in the cooling tower, either at a valve or a drainpipe. The grab samples are collected directly into the containers specified by the laboratory. Samples are analyzed for metals, pH, sodium, SC, sulfate, total alkalinity, total dissolved solids, total hardness, and total phosphorus.

## 5.2. Cooling Tower Blow Down Effluent Sampling and Analysis

For the cooling tower blow down sampling and analysis, calibration is performed on SC and pH meters less than 12 hours before sampling. SC and pH data measured in the field are written down on field tracking forms. CoC forms are filled out appropriately and signed by the sampler for each analytical laboratory to which the samples are transferred; CoC numbers are also written on the field logs. Analytical methods used are appropriate EPA-approved Methods (U.S. Environmental Protection Agency, 2005) or Standard Methods (Clesceri et al., 1998).

First semester cooling tower blow down samples were collected on April 29. Second semester samples were collected on October 27 and November 11. Samples were collected, analyzed, and results entered into the Environmental Protection Department's database according to a complete set of written protocols, which are documented in the LLNL Environmental Protection Department's Environmental Monitoring Plan (Woods, N. [Ed.], 2009).

#### 5.3. Cooling Tower Blow Down Monitoring Results

Second semester analytical results for cooling tower blow down samples collected during October and November were generally consistent with data found in WDR Order No. R5-2008-0148, Attachments 19 and 20, with the following exceptions:

- Copper concentrations in samples collected ranged from 0.0043 mg/L to 0.850 mg/L, which is greater than the concentrations of data summarized in the WDR attachments (0.0056 mg/L to 0.0083 mg/L). Cooling towers at Building 809 (0.580 mg/L) and Building 826 (0.850 mg/L) had elevated copper values. **Table D.2**, metals results, presents the data in units of µg/L. Eighteen months ago, plastic tubing that was used to direct cooling tower blow down to percolation pits was replaced with copper pipe. It is possible the elevated copper values are an early sign of corrosion. LLNL maintenance staff will evaluate the copper piping and, if warranted, the copper pipe will be replaced with plastic tubing.
- Zinc concentrations in samples collected ranged from 0.025 mg/L to 0.320 mg/L, which is greater than the concentrations of data summarized in the WDR attachments (<0.02 mg/L to 0.044 mg/L). The cooling tower at Building 825 was the only cooling tower showing elevated zinc in the second semester results. **Table D.2**, metals results, presents the data in units of µg/L. The QA data for the second semester zinc cooling tower discharge analyses is suspicious (see **Table D.4**). The Building 825 data for this semester may be a laboratory anomaly. LLNL will continue to closely evaluate future zinc data.

Sample results are listed in **Appendix D** along with the Quality Assurance results, field tracking forms, and CoC's. **Table D.1** lists anion data, **Table D.2** lists metals results, and **Table D.3** provides data on the required physical characteristics. QC data from duplicate sampling is provided in **Table D.4**.

## 6. Mechanical Equipment Effluent Monitoring

## 6.1. Mechanical Equipment Discharge Monitoring Program

Monitoring required for mechanical equipment discharge effluent to percolation pits is specified in the MRP R5-2008-0148. During the first semester of 2009, LLNL implemented the monitoring elements for the identified mechanical equipment systems located at Buildings 806, 827A, 827C, 827D, and 827E. **Appendix E, Figure E.1** provides the locations of those systems.

## 6.2. Mechanical Equipment Effluent Sampling and Analysis

The initial mechanical equipment effluent monitoring was completed during the second semester of 2009 with results reported in **Appendix E**. Mechanical equipment room monitoring was completed using a grab sample technique until the mechanical equipment percolation pits can be retrofitted to allow composite sampling. LLNL completed the retrofit of the percolation pits with Christi Boxes that will allow an automatic sampler to be placed within the new boxes, which will allow composite samples to be collected during operations. Composite samples will begin to be collected starting in the first semester of 2010.

For the sampling and analysis of mechanical equipment effluent, CoC forms are filled out appropriately and signed by the sampler for each analytical laboratory to which the samples are transferred; CoC numbers are also written on the field logs, provided in **Appendix E**. Analytical methods used are appropriate EPA-approved Methods (U.S. Environmental Protection Agency, 2005) or Standard Methods (Clesceri et al., 1998).

Second semester mechanical equipment effluent samples were collected October 22, 2009. Samples were collected, analyzed, and results entered into the Environmental Protection Department's database according to a complete set of written protocols, which are documented in the LLNL Environmental Protection Department's Environmental Monitoring Plan (Woods, N. [Ed.], 2009).

#### 6.3. Mechanical Equipment Effluent Monitoring Results

Sample analytical results for this monitoring network are presented in **Appendix E**. Second semester analytical results for mechanical equipment effluent samples were collected October 22, 2009, and results consistent with data found in Attachments 5 and 6 in the MRP R5-2008-0148. **Table E.1** lists anion data, **Table E.2** lists metals results and **Table E.3** provides data on the required physical characteristics. Data from duplicate sampling is provided in the data tables.

# 7. Status of Special Studies and Development of Salinity Evaluation and Minimization Plan

WDR R5-2008-0148 requires semiannual progress reports on the salinity evaluation and minimization plan. Required by March 1, 2010, is a salinity evaluation and minimization plan to address the sources of salinity in cooling tower and mechanical equipment effluent. LLNL has completed the preliminary evaluation of the existing systems and is in the process of developing engineering alternatives. In addition, in March 2009, LLNL submitted the work plan to evaluate the potential for mechanical equipment, cooling tower, and septic system discharges to impact ground water beneficial use to the CVRWQCB for their review as required by Provisions 5 and 8 of the Permit. The CVRWQCB approved the work plan in a letter dated October 1, 2009.

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## Acknowledgments

The compliance-monitoring program supporting WDR 08-0148 is large and could not be performed without the dedicated efforts of many people. The completion of this report, and the groundwork laid for future report submissions, would not have been possible without the invaluable and timely contributions of Don MacQueen, Zafer Demir, Suzie Chamberlain, and Karen Folks.

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# Appendix A

**Sewage Evaporation and Percolation Pond Network** 

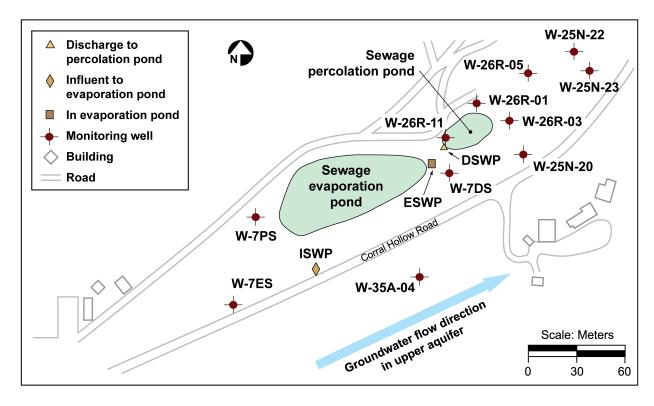


Figure A.1. Sewer pond wastewater and ground water monitoring network.

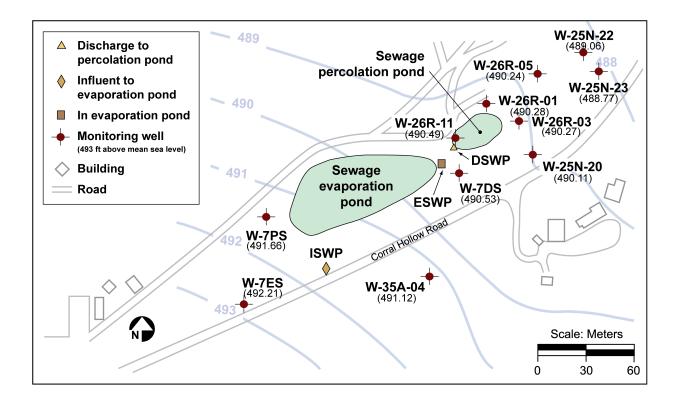


Figure A.2. Site 300 sewer pond wastewater and effluent monitoring network with ground water elevations (ft-above mean sea level).

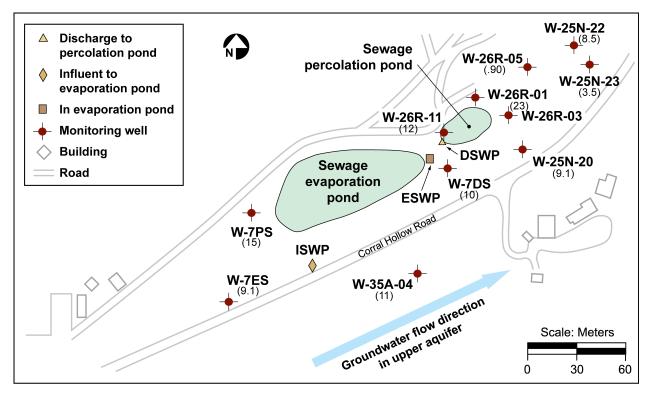


Figure A.3. Site 300 sewer pond wastewater and effluent monitoring network with nitrate concentrations (in mg/L).

## Table of physical characteristics for Figure A.3.

Well	Month	Fecal Coliform (MPN/100mL)	Total Coliform (MPN/100mL)	Sodium (mg/L)	Chloride (mg/L)	Nitrate (as NO3) (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)
W-7ES	Feb	<2	<2	180	150	11	400	0.37
W-7ES	May	<2	9.0	-	-	10	-	-
W-7ES	Aug	<2	<2	190	150	10	380	0.34
W-7ES	Nov	<2	<2	-	-	9.1	-	-
W-7PS	Feb	<2	<2	190	160	15	320	0.40
W-7PS	May	<2	<2	-	-	16	-	-
W-7PS	Aug	<2	<2	190	170	18	300	0.35
W-7PS	Nov	<2	<2	-	-	15	-	-
W-35A-04	Feb	<2	<2	180	150	13	400	0.46
W-35A-04	May	<2	2.0	-	-	12	-	-
W-35A-04	Dec	<2	23	-	-	11	-	-
W-25N-20	Feb	<2	<2	170	150	11	360	0.34
W-25N-20	May	<2	<2	-	-	11	-	-
W-25N-20	Aug	<2	<2	190	150	9.9	370	0.34
W-25N-20	Nov	<2	4.0	-	-	9.1	-	-
W-25N-23	Feb	<2	<2	160	110	5.4	470	0.47
W-25N-23	Aug	<2	<2	150	110	3.5	400	0.50
W-25N-22	Feb	<2	<2	160	130	25	460	0.50
W-25N-22	Aug	<2	<2	160	130	8.5	430	0.51
W-26R-01	Feb	<2	30	200	160	26	240	0.44
W-26R-01	May	<2	<2	-	-	26	-	-
W-26R-01	Aug	<2	<2	200	160	26	240	0.42
W-26R-01	Nov	<2	<2	-	-	23	-	-
W-26R-05	Feb	<2	<2	140	97	< 0.44	220	0.45
W-26R-05	May	<2	2.0	-	-	0.70	-	-
W-26R-05	Aug	<2	<2	150	95	1.5	220	0.44
W-26R-05	Nov	<2	<2	-	-	0.90	-	-
W-26R-11	Feb	<2	<2	180	140	11	320	0.34
W-26R-11	May	<2	<2	-	-	13	-	-
W-26R-11	Aug	<2	<2	190	150	13	320	0.30
W-26R-11	Nov	<2	4.0	-	-	12	-	-
W-7DS	Feb	<2	<2	170	140	10	360	0.37
W-7DS	May	<2	<2	-	-	5.6	-	-
W-7DS	Aug	<2	<2	180	150	10	370	0.32
W-7DS	Nov	<2	<2	-	-	10	-	-

A dash (-) denotes analysis not required.

## Table of physical characteristics for Figure A.3. (Continued)

			Specific Conductance	Total Alkalinity (as CaCO3)	Total dissolved solids (TDS)	Total Hardness (as CaCO3)	Total Phosphorus (as PO4)
Well	Date	pН	(µmhos/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
W-7ES	11-Feb	7.7	1590	290	1100	510	0.25
W-7ES	13-May	7.6	1560	-	-	-	-
W-7ES	10-Aug	7.7	1580	290	1100	520	< 0.15
W-7ES	9-Nov	7.7	1580	-	-	-	-
W-7PS	3-Feb	7.7	1560	320	1100	440	0.24
W-7PS	6-May	7.7	1480	-	-	-	-
W-7PS	11-Aug	7.7	1550	340	1000	420	0.21
W-7PS	4-Nov	7.7	1600	-	-	-	-
W-35A-04	9-Feb	7.9	1440	280	1100	480	0.23
W-35A-04	13-May	7.7	1520	-	-	-	-
W-35A-04	16-Dec	7.7	1610	-	-	-	-
W-25N-20	4-Feb	7.6	1520	290	1100	460	0.19
W-25N-20	6-May	7.6	1540	-	-	-	-
W-25N-20	10-Aug	7.8	1610	300	1100	520	0.23
W-25N-20	4-Nov	7.7	1560	-	-	-	-
W-25N-23	9-Feb	7.7	1370	190	1100	440	< 0.15
W-25N-23	11-Aug	7.4	1350	200	1000	410	< 0.15
W-25N-22	9-Feb	7.8	1480	190	1100	420	< 0.15
W-25N-22	11-Aug	7.9	1430	180	1200	400	0.18
W-26R-01	3-Feb	7.8	1300	240	960	260	0.15
W-26R-01	6-May	7.7	1360	-	-	-	-
W-26R-01	12-Aug	7.8	1320	250	940	270	< 0.15
W-26R-01	4-Nov	7.9	1350	-	-	-	-
W-26R-05	3-Feb	7.9	1050	210	760	220	0.54
W-26R-05	11-May	7.9	1030	-	-	1	-
W-26R-05	10-Aug	8	1060	200	710	230	0.4
W-26R-05	9-Nov	8	1070	-	-	-	-
W-26R-11	3-Feb	7.7	1470	290	1000	410	0.25
W-26R-11	11-May	7.7	1440	-	-	1	-
W-26R-11	10-Aug	7.7	1540	310	1100	450	< 0.15
W-26R-11	4-Nov	7.7	1500	-	-	-	-
W-7DS	4-Feb	7.7	1480	280	1100	470	0.24
W-7DS	11-May	7.7	1540	-	-	-	-
W-7DS	10-Aug	7.7	1580	290	1100	500	0.18
W-7DS	9-Nov	7.8	1570	-	-	1	-

A dash (-) denotes analysis not required.

## Table of physical characteristics for Figure A.3. (Continued)

Analyte	Month	W-7ES	W-7PS	W-35A-04	W-25N-20	W-25N-23	W-25N-22	W-26R-01	W-26R-05	W-26R-11	W-7DS
Aluminum (μg/L)	Feb	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	Aug	< 50	< 50	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Arsenic (µg/L)	Feb	3.1	2.5	2	2.5	<2	7.5	7.9	5.6	2.3	2.8
	Aug	<2	4.9	-	3.8	2.7	7.7	13	11	3.6	3.3
	Dec	-	-	3.6	-	-	-	-	-	-	-
Barium (µg/L)	Feb	53	68	49	51	30	28	31	26	53	50
	Aug	52	70	-	50	27	26	33	26	56	50
	Dec	-	1	50	-	-	-	-	-	-	-
Boron (µg/L)	Feb	2900	2700	3100	2800	1200	1200	1600	1000	2600	2800
	Aug	3100	2400	-	3100	1100	1000	1600	1000	2600	3000
Cadmium (µg/L)	Feb	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	Aug	< 50	< 50	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	Dec	-	ı	< 0.5	-	-	-	-	-	-	-
Calcium (µg/L)	Feb	120000	100000	110000	110000	110000	100000	65000	54000	93000	110000
	Aug	120000	95000	-	120000	97000	97000	68000	58000	100000	110000
Chromium (µg/L)	Feb	<1	1.1	<1	<1	<1	<1	<1	<1	<1	<1
	Aug	<1	1.5	-	<1	<1	<1	<1	<1	1.1	<1
	Dec	-	-	<1	-	-	-	-	-	-	-
Chromium (VI)											
(μg/L)	Feb	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Aug	<1	<1	-	<1	<1	<1	<1	<1	<1	<1
Copper (µg/L)	Feb	<1	3.5	1.7	1.3	<1	<1	2.3	8.8	<1	1.1
	May	-	-	<10	-	-	-	-	-	-	-
	Aug	<1	<1	-	<1	<1	<1	1.2	1.2	<1	<1
	Dec	-	-	<10	-	-	-	-	-	-	-
Iron (μg/L)	Feb	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	Aug	<100	<100	-	<100	<100	<100	< 50	<100	<100	<100
Lead (µg/L)	Feb	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	Aug	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
	Dec	-	ı	<2	-	-	-	-	-	-	-
Magnesium											<u>-</u>
(µg/L)	Feb	52000	45000	51000	49000	43000	41000	24000	20000	43000	48000
	Aug	55000	44000	-	54000	40000	39000	25000	22000	47000	53000

A dash (-) denotes analysis not required.

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## Table of physical characteristics for Figure A.3. (Continued)

Analyte	Month	W-7ES	W-7PS	W-35A-04	W-25N-20	W-25N-23	W-25N-22	W-26R-01	W-26R-05	W-26R-11	W-7DS
Manganese											
(μg/L)	Feb	<10	<10	<10	<10	17	<10	<10	<10	<10	<10
	Aug	<30	< 30	-	<30	< 30	70	<10	<30	<30	< 30
Molybdenum											
(µg/L)	Feb	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	Aug	<25	<25	-	<25	<25	<25	< 50	<25	<25	<25
	Dec	-	-	<25	-	-	-	-	-	-	-
Nickel (μg/L)	Feb	<2	10	<2	2.6	<2	9.5	<2	<2	<2	<2
	Aug	2.5	2.8	-	<2	<2	30	<2	<2	<2	<2
	Dec	-	-	<5	-	-	-	-	-	-	-
Potassium (μg/L)	Feb	5700	5800	5400	5500	11000	11000	10000	9300	5600	5500
	Aug	5800	5600	-	5800	10000	11000	11000	9800	6100	5800
	Dec	-	-	6000	-	-	-	-	-	-	-
Selenium (µg/L)	Feb	3.8	10	3	3.8	<2	2.7	11	<2	5.5	3.4
	Aug	6.5	19	-	6.7	3.6	3.9	12	2.2	9.2	5.4
	Dec	-	-	4	-	-	-	-	-	-	-
Vanadium (μg/L)	Feb	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
4.5	Aug	<20	<20	-	<20	<20	<20	<20	<20	<20	<20
	Dec	-	-	<25	-	-	-	-	-	-	-
Zinc (µg/L)	Feb	<5	5.8	<5	6.4	8.9	<5	6.7	<5	<5	5.3
	Aug	<5	42	-	<5	6.1	<5	8.5	<5	<5	<5
	Dec	-	-	<20	-	-	-	-	-	-	-

A dash (-) denotes analysis not required.

Table A.1. Summary of Site 300 sewer pond well specifications.

Well	HSU	Easting	Northing	Ground surface elevation	Measuring point elevation	Screen top elevation	Screen bottom elevation	Bentonite top elevation	Filter pack top elevation	Well bottom elevation
W-7E	Tnbs <sub>1</sub>	1,711,708	414,581	506.70	509.28	447.90	428.70	453.70	451.70	428.70
W-7ES	Qal- Tnbs <sub>1</sub>	1,711,719	414,586	506.41	509.71	491.41	481.41	496.41	495.41	479.61
W-7PS	Qal- Tnbs <sub>1</sub>	1,711,773	414,782	506.10	508.78	489.60	486.60	494.10	492.10	486.60
W-35A-04	Qal- Tnbs <sub>1</sub>	1,712,036	414,642	504.07	503.98	485.07	475.07	494.87	486.27	475.07
W-26R-01	Qal- Tnbs <sub>1</sub>	1,712,267	415,036	506.74	509.71	486.94	481.94	494.24	490.74	476.94
W-26R-11	Qal- Tnbs <sub>1</sub>	1,712,198	414,961	504.93	507.21	489.13	479.13	493.13	491.13	477.93
W-26R-05	Qal- Tnbs <sub>1</sub>	1,712,339	415,070	511.31	513.11	491.11	486.11	500.81	498.81	485.81
W-25N-20	Qal- Tnbs <sub>1</sub>	1,712,371	414,923	502.11	504.94	490.11	475.11	494.61	492.61	474.11
W-7DS	Qal- Tnbs <sub>1</sub>	1,712,206	414,880	503.30	506.60	487.80	477.80	491.80	489.80	476.30
W-26R-03	Qal- Tnbs <sub>1</sub>	1,712,341	414,998	505.95	506.22	482.15	472.15	489.65	487.65	471.85
W-25N-23	Qal- Tnbs <sub>1</sub>	1,712,521	415,109	507.58	510.39	488.58	473.58	495.08	493.08	472.28

Note: All measurements are made in feet; elevations are in feet above mean sea level.

HSU = Hydrostratigraphic unit.

Table A.2. Site 300 sewer pond ground water monitoring network 2009 annual ground water elevation summary.

Well	Date sampled	Ground water depth (ft.)	Ground water elevation (ft. above MSL)
W-7ES	Feb 4	NM/RA CONSTRUCTION	NM/RA CONSTRUCTION
W-7ES	Feb 11	18.3	491.4
W-7ES	Feb 12	18.3	491.4
W-7ES	May 13	17.9	491.8
W-7ES	May 14	17.9	491.8
W-7ES	Aug 10	16.7	493.0
W-7ES	Aug 11	16.7	493.0
W-7ES	Nov 9	18.2	491.5
W-7ES	Nov 10	18.0	491.7
W-7PS	Feb 3	18.1	490.7
W-7PS	Feb 4	18.1	490.7
W-7PS	May 6	17.4	491.4
W-7PS	May 7	17.4	491.4
W-7PS	Aug 11	16.4	492.4
W-7PS	Aug 12	16.3	492.5
W-7PS	Nov 4	17.5	491.3
W-7PS	Nov 5	17.5	491.2
W-35A-04	Feb 9	13.5	490.5
W-35A-04	Feb 10	13.4	490.6
W-35A-04	May 13	13.1	490.9
W-35A-04	May 14	13.2	490.8
W-35A-04	Dec 16	13.8	490.3
W-25N-20	Feb 4	15.6	489.3
W-25N-20	Feb 5	15.7	489.3
W-25N-20	May 6	15.2	489.7
W-25N-20	May 7	15.2	489.7
W-25N-20	Aug 10	14.2	490.7
W-25N-20	Aug 11	14.2	490.7
W-25N-20	Nov 4	15.2	489.8
W-25N-20	Nov 5	15.2	489.7
W-25N-23	Feb 9	21.7	488.7
W-25N-23	Feb 10	21.8	488.6
W-25N-23	Aug 11	21.1	489.3
W-25N-23	Aug 12	21.1	489.3
W-25N-22	Feb 9	22.6	490.4
W-25N-22	Feb 10	22.7	490.4
W-25N-22	Aug 11	23.7	489.4
W-25N-22	Aug 12	23.7	489.4
W-26R-01	Feb 3	20.3	489.4
W-26R-01	Feb 4	20.2	489.5
W-26R-01	May 6	19.8	489.9
W-26R-01	May 7	19.8	489.9
W-26R-01	Aug 12	18.7	491.0

Table A.2. Site 300 sewer pond ground water monitoring network 2009 annual ground water elevation summary. (Continued)

Well	Date sampled	Ground water depth (ft.)	Ground water elevation (ft. above MSL)
W-26R-01	Aug 13	18.7	491.0
W-26R-01	Nov 4	19.8	489.9
W-26R-01	Nov 5	19.8	489.9
W-26R-05	Feb 3	23.5	489.6
W-26R-05	Feb 5	25.4	487.7
W-26R-05	May 11	23.3	489.8
W-26R-05	May 14	25.4	487.7
W-26R-05	Aug 10	22.5	490.6
W-26R-05	Aug 13	23.6	489.5
W-26R-05	Nov 9	23.3	489.8
W-26R-05	Nov 12	25.8	487.3
W-26R-11	Feb 3	17.6	489.6
W-26R-11	Feb 4	17.6	489.6
W-26R-11	May 11	17.1	490.1
W-26R-11	May 12	17.1	490.1
W-26R-11	Aug 10	16.0	491.2
W-26R-11	Aug 11	16.0	491.2
W-26R-11	Nov 4	17.1	490.2
W-26R-11	Nov 5	17.2	490.0
W-7DS	Feb 4	16.9	489.7
W-7DS	Feb 5	16.9	489.7
W-7DS	May 11	16.4	490.2
W-7DS	May 12	16.5	490.1
W-7DS	Aug 10	15.3	491.3
W-7DS	Aug 11	15.3	491.3
W-7DS	Nov 9	16.5	490.1
W-7DS	Nov 10	16.6	490.0

Table A.3. S-300 sewer pond wastewater monitoring network 2009 coliform, anion, and physical characteristic data summary

Well	Date	pН	Specific Conductance (µmhos/cm)	Biochemical Oxygen Demand (mg/L)	Dissolved Oxygen (mg/L)	Fecal Coliform (MPN/100mL)	Total Coliform (MPN/100mL)	Sodium (mg/L)
3-ISWP-OW	5/13/09	9.9	1,190	13	-	-	-	-
3-ESWP-OW	5/13/09	9.9	7,380	56	29	220	500	1,800
3-ISWP-OW	10/8/09	8.1	1,420	820	-	-	-	-
3-ESWP-OW	10/8/09	9.4	6,510	80	9.9	13,000	24,000	1,800

A dash (-) denotes analysis not required.

Table A.4. S-300 sewer pond wastewater monitoring network 2009 annual metals data summary.

		3-ESWP-OW
Analyte	Date	(μg/L)
Al	May 13	<250
Al	Oct 8	<100
As	May 13	7.1
As	Oct 8	<10
Ba	May 13	25
Ba	Oct 8	130
В	May 13	7000
В	Oct 8	7400
Cd	May 13	<50
Cd	Oct 8	<250
Ca	May 13	18000
Ca	Oct 8	32000
Cr	May 13	1.1
Cr	Oct 8	1.3
Cr6	May 13	<1
Cr6	Oct 15	<1
Cu	May 13	3.1
Cu	Oct 8	7.7
Fe	May 13	< 500
Fe	Oct 8	260
Pb	May 13	<5
Pb	Oct 8	<25
Mg	May 13	10000
Mg	Oct 8	20000
Mn	May 13	<150
Mn	Oct 8	<60
Mo	May 13	<120
Mo	Oct 8	56
Ni	May 13	3.3
Ni	Oct 8	<10
K	May 13	93000
K	Oct 8	100000
Se	May 13	37
Se	Oct 8	<10
V	May 13	<20
V	Oct 8	<100
Zn	May 13	<20
Zn	Oct 8	<100

Table A.5. S-300 sewer pond wastewater monitoring network 2009 annual QA data.

Location	Date	Туре	pН	Specific Conductance (µmhos/cm)	BOD (mg/L)	DO (mg/L)
3-ESWP-OW	5/13/09	Routine	9.9	7,380	56	29
3-ESWP-OW	5/13/09	Duplicate	a	a	a	26
3-ISWP-OW	10/8/09	Routine	8.1	1,420	820	a
3-ISWP-OW	10/8/09	Duplicate	a	a	790	a

<sup>&</sup>lt;sup>a</sup> Duplicate analysis on selected analytes are performed on a rotating semester basis, one analyte per semester.

Table A.6. Site 300 sewer pond ground water monitoring network 2009 annual anions data summary.

W/ H	D /	Sodium	Chloride	Nitrate (as NO3)	Sulfate	Fluoride
Well	Date	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
W-7ES	Feb 11	180	150	11	400	0.37
W-7ES	May 13	190	150	10	380	0.34
W-7ES	Aug 10					0.34
W-7ES	Nov 9	-	-	9.1	- 220	- 0.40
W-7PS	Feb 3	190	160	15	320	0.40
W-7PS	May 6	-	-	16	-	-
W-7PS	Aug 11	190	170	18	300	0.35
W-7PS	Nov 4	-	-	15	-	-
W-35A-04	Feb 9	180	150	13	400	0.46
W-35A-04	May 13	-	-	12	-	-
W-35A-04	Dec 16	-	-	11	-	-
W-25N-20	Feb 4	170	150	11	360	0.34
W-25N-20	May 6	-	-	11	-	-
W-25N-20	Aug 10	190	150	9.9	370	0.34
W-25N-20	Nov 4	-	-	9.1	-	-
W-25N-23	Feb 9	160	110	5.4	470	0.47
W-25N-23	Aug 11	150	110	3.5	400	0.50
W-25N-22	Feb 9	160	130	25	460	0.50
W-25N-22	Aug 11	160	130	8.5	430	0.51
W-26R-01	Feb 3	200	160	26	240	0.44
W-26R-01	May 6	-	-	26	-	-
W-26R-01	Aug 12	200	160	26	240	0.42
W-26R-01	Nov 4	-	-	23	-	-
W-26R-05	Feb 3	140	97	< 0.44	220	0.45
W-26R-05	May 11	-	-	0.70	-	-
W-26R-05	Aug 10	150	95	1.5	220	0.44
W-26R-05	Nov 9	-	-	0.90	-	-
W-26R-11	Feb 3	180	140	11	320	0.34
W-26R-11	May 11	-	-	13	-	-
W-26R-11	Aug 10	190	150	13	320	0.30
W-26R-11	Nov 4	-		12	-	-
W-7DS	Feb 4	170	140	10	360	0.37
W-7DS	May 11	-	-	5.6	-	-
W-7DS	Aug 10	180	150	10	370	0.32
W-7DS	Nov 9	-	-	10	-	-

A dash (-) denotes analysis not required.

Table A.7. Site 300 sewer pond ground water monitoring network 2009 annual coliform data summary.

Well	Date	Fecal Coliform (MPN/100 mL)	Total Coliform (MPN/100 mL)
W-7ES	Feb 12	<2	<2
W-7ES	May 14	<2	9.0
W-7ES	Aug 11	<2	<2
W-7ES	Nov 10	<2	<2
W-7ES W-7PS	Feb 4	<2	<2
W-71S W-7PS	May 7	<2	<2
W-7PS	Aug 12	<2	<2
W-71S W-7PS	Nov 5	<2	<2
W-35A-04	Feb 10	<2	<2
W-35A-04	May 14	<2	2.0
W-35A-04	Dec 17	<2	23
W-25N-20	Feb 5	<2	<2
W-25N-20 W-25N-20	May 7	<2	<2
W-25N-20 W-25N-20	Aug 11	<2	<2
W-25N-20 W-25N-20	Nov 5	<2	4.0
W-25N-23	Feb 10	<2	<2
W-25N-23	Aug 12	<2	<2
W-25N-22	Feb 10	<2	<2
W-25N-22	Aug 12	<2	<2
W-25R-22 W-26R-01	Feb 4	<2	30
W-26R-01	May 7	<2	<2
W-26R-01	Aug 13	<2	<2
W-26R-01	Nov 5	<2	<2
W-26R-05	Feb 5	<2	<2
W-26R-05	May 14	<2	2.0
W-26R-05	Aug 13	<2	<2
W-26R-05	Nov 12	<2	<2
W-26R-11	Feb 4	<2	<2
W-26R-11	May 12	<2	<2
W-26R-11	Aug 11	<2	<2
W-26R-11	Nov 5	<2	4.0
W-7DS	Feb 5	<2	<2
W-7DS	May 12	<2	<2
W-7DS	Aug 11	<2	<2
W-7DS	Nov 10	<2	<2

Table A.8. Site 300 sewer pond ground water monitoring network 2009 annual physical chemistry data.

Well	Date	pН	Specific Conductance (µmhos/cm)	Total Alkalinity (as CaCO3) (mg/L)	Total dissolved solids (TDS) (mg/L)	Total Hardness (as CaCO3) (mg/L)	Total Phosphorus (as PO4) (mg/L)
W-7ES	Feb 11	7.7	1590	(mg/L) 290	1100	510	0.25
W-7ES W-7ES	May 13	7.7	1560	290	-	310	-
W-7ES W-7ES	Aug 10	7.7	1580	290	1100	520	<0.15
W-7ES W-7ES	Nov 9	7.7	1580	-	-	-	- 0.13
W-7PS	Feb 3	7.7	1560	320	1100	440	0.24
W-71 S W-7PS	May 6	7.7	1480	320	1100	-	- 0.24
W-7PS	Aug 11	7.7	1550	340	1000	420	0.21
W-7PS	Nov 4	7.7	1600	-	-	-	-
W-713 W-35A-04	Feb 9	7.7	1440	280	1100	480	0.23
W-35A-04	May 13	7.7	1520	-	-	-	-
W-35A-04	Dec 16	7.7	1610	-		_	-
W-25N-20	Feb 4	7.6	1520	290	1100	460	0.19
W-25N-20	May 6	7.6	1540	-	-	-	-
W-25N-20	Aug 10	7.8	1610	300	1100	520	0.23
W-25N-20	Nov 4	7.7	1560	-	-	-	0.23
W-25N-23	Feb 9	7.7	1370	190	1100	440	< 0.15
W-25N-23	Aug 11	7.4	1350	200	1000	410	<0.15
W-25N-22	Feb 9	7.8	1480	190	1100	420	<0.15
W-25N-22	Aug 11	7.9	1430	180	1200	400	0.18
W-26R-01	Feb 3	7.8	1300	240	960	260	0.15
W-26R-01	May 6	7.7	1360	-	-	-	-
W-26R-01	Aug 12	7.8	1320	250	940	270	< 0.15
W-26R-01	Nov 4	7.9	1350	-	-	-	-
W-26R-05	Feb 3	7.9	1050	210	760	220	0.54
W-26R-05	May 11	7.9	1030	-	-	-	-
W-26R-05	Aug 10	8.0	1060	200	710	230	0.40
W-26R-05	Nov 9	8.0	1070	-	-	-	-
W-26R-11	Feb 3	7.7	1470	290	1000	410	0.25
W-26R-11	May 11	7.7	1440	-	-	-	-
W-26R-11	Aug 10	7.7	1540	310	1100	450	< 0.15
W-26R-11	Nov 4	7.7	1500	-	-	-	-
W-7DS	Feb 4	7.7	1480	280	1100	470	0.24
W-7DS	May 11	7.7	1540	-	-	-	-
W-7DS	Aug 10	7.7	1580	290	1100	500	0.18
W-7DS	Nov 9	7.8	1570	-	-	-	-

Table A.9. Site 300 sewer pond ground water monitoring network 2009 annual metals analysis data summary.

Analyte	Month	W-7ES	W-7PS	W-35A-04	W-25N-20	W-25N-23	W-25N-22	W-26R-01	W-26R-05	W-26R-11	W-7DS
Aluminum (μg/L)	Feb	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
	Aug	< 50	< 50	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Arsenic (μg/L)	Feb	3.1	2.5	2.0	2.5	<2	7.5	7.9	5.6	2.3	2.8
,	Aug	<2	4.9	-	3.8	2.7	7.7	13	11	3.6	3.3
	Dec	-	-	3.6	-	-	-	-	-	-	-
Barium (μg/L)	Feb	53	68	49	51	30	28	31	26	53	50
,	Aug	52	70	-	50	27	26	33	26	56	50
	Dec	-	-	50	-	-	-	-	-	-	-
Boron (μg/L)	Feb	2900	2700	3100	2800	1200	1200	1600	1000	2600	2800
· · ·	Aug	3100	2400	-	3100	1100	1000	1600	1000	2600	3000
Cadmium (µg/L)	Feb	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
	Aug	< 50	< 50	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	Dec	-	-	< 0.5	-	-	-	-	-	-	-
Calcium (µg/L)	Feb	120000	100000	110000	110000	110000	100000	65000	54000	93000	110000
	Aug	120000	95000	-	120000	97000	97000	68000	58000	100000	110000
Chromium (µg/L)	Feb	<1	1.1	<1	<1	<1	<1	<1	<1	<1	<1
	Aug	<1	1.5	-	<1	<1	<1	<1	<1	1.1	<1
	Dec	-	-	<1	-	-	-	-	_	-	-
Chromium (VI) (µg/L)	Feb	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
·, ·	Aug	<1	<1	-	<1	<1	<1	<1	<1	<1	<1

Table A.9. Site 300 sewer pond ground water monitoring network 2009 annual metals analysis data summary. (Continued)

Analyte	Month	W-7ES	W-7PS	W-35A-04	W-25N-20	W-25N-23	W-25N-22	W-26R-01	W-26R-05	W-26R-11	W-7DS
Copper (µg/L)	Feb	<1	3.5	1.7	1.3	<1	<1	2.3	8.8	<1	1.1
	May	-	-	<10	-	-	-	-	-	-	-
	Aug	<1	<1	-	<1	<1	<1	1.2	1.2	<1	<1
	Dec	-	-	<10	-	-	-	-	-	-	-
Iron (μg/L)	Feb	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
	Aug	<100	<100	-	<100	<100	<100	< 50	<100	<100	<100
Lead (μg/L)	Feb	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	Aug	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
	Dec	-	-	<2	-	-	-	-	-	-	-
Magnesiu m (μg/L)	Feb	52000	45000	51000	49000	43000	41000	24000	20000	43000	48000
	Aug	55000	44000	-	54000	40000	39000	25000	22000	47000	53000
Manganes e (μg/L)	Feb	<10	<10	<10	<10	17	<10	<10	<10	<10	<10
	Aug	<30	<30	-	<30	<30	70	<10	<30	<30	<30
Molybden um (μg/L)	Feb	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
(18)	Aug	<25	<25	-	<25	<25	<25	< 50	<25	<25	<25
	Dec	-	-	<25	-	-	-	-	-	-	-
Nickel (μg/L)	Feb	<2	10	<2	2.6	<2	9.5	<2	<2	<2	<2
	Aug	2.5	2.8	_	<2	<2	30	<2	<2	<2	<2
	Dec	-	-	<5	-	-	-	-	-	-	-
Potassium (μg/L)	Feb	5700	5800	5400	5500	11000	11000	10000	9300	5600	5500
\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	Aug	5800	5600	-	5800	10000	11000	11000	9800	6100	5800
	Dec	-	-	6000	-	-	-	-	-	-	_

Table A.9. Site 300 sewer pond ground water monitoring network 2009 annual metals analysis data summary. (Continued)

Selenium (µg/L)	Feb	3.8	10	3.0	3.8	<2	2.7	11	<2	5.5	3.4
	Aug	6.5	19	-	6.7	3.6	3.9	12	2.2	9.2	5.4
	Dec	-	-	4.0	-	-	-	-	-	-	-
Vanadium (μg/L)	Feb	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	Aug	<20	<20	-	<20	<20	<20	<20	<20	<20	<20
	Dec	-	-	<25	-	-	-	-	-	-	-
Zinc (µg/L)	Feb	<5	5.8	<5	6.4	8.9	<5	6.7	<5	<5	5.3
	Aug	<5	42	-	<5	6.1	<5	8.5	<5	<5	<5
	Dec	-	-	<20	-	-	-	-	-	-	-

Table A.10. Site 300 sewer pond ground water monitoring network 2009 annual QA data.

					Well Id	entifier			
		W-35A-04	W-35A-04	W-35A-04	W-35A-04	W-26R-01	W-26R-01	W-26R-01	W-26R-01
		Dec 16	Dec 16	Dec 17	<b>Dec 17</b>	Nov 4	Nov 4	Nov 5	Nov 5
Analyte	Units	Routine	Duplicate	Routine	Duplicate	Routine	Duplicate	Routine	Duplicate
pН	Units	7.7	7.7	-	-	7.9	7.9	-	ı
Specific	μmhos/cm	1610	1600	-	-	1350	1340	-	-
Conductance									
Fecal Coliform	MPN/100mL	-	-	<2	<2	-	1	<2	<2
Total Coliform	MPN/100mL	-	-	23	8.0	-	ı	<2	<2
Arsenic	μg/L	3.6	3.6	-	-	-	1	-	ı
Barium	μg/L	50	49	1	-	-	ı	-	ı
Cadmium	μg/L	< 0.5	< 0.5	1	-	-	ı	-	ı
Chromium	μg/L	<1	<1	ı	ı	-	ı	-	ī
Copper	μg/L	<10	<10	1	-	-	ı	-	ı
Lead	μg/L	<2	<2	1	1	-	1	-	Ī
Molybdenum	μg/L	<25	<25	1	1	-	1	-	Ī
Nickel	μg/L	<5	<5	ı	ı	-	ı	-	Ī
Potassium	μg/L	6000	6000	-	-	-	-	-	-
Selenium	μg/L	4.0	4.0	-	-	-	-	-	-
Vanadium	μg/L	<25	<25	-	-	-	-	-	ī
Zinc	μg/L	<20	<20	-	-	-	-	-	-
Nitrate (as NO3)	mg/L	11	11	-	-	23	24	-	-

# FIELD TRACKING FORM EAST END OF SITE 300 SEWAGE POND

Lab FGL BC

CoC # 47109 41108

Ship It # HAND CARRY 129151

DATE: 10/8/09

TIME: 14:40

Special Instructions: Semi-Annual Sampling in 1st and 4th Quarters (Feb & Oct)

Samples must be taken after 1 p.m.

Print collection time on sample bottles.

DO/conductivity/pH hold time 24 hr.

		Field	Measu	rements				Samples for Lab Analysis
Location	рН	COND	Depth	DO (PPM)	Temp (°C)	Comments	Initials	Analytical Codes:
3-ESWP-01-OW							KB.	FGLAB
(East end of Sewage Pond)	09	6.86	12	9:2 ppm	18.1°		CF	E360.1 DO (1x500-mL glass, NO head space)
(East end of Sewage Pond)	0	m91					M	E120.1A & E150.1A Conductivity/pH
								(2x250-mL poly)
								SM9221 Total, Fecal Coliform (1x250mL) 6hr hold
3-WSWP-01-OW								SM5210B-A BOD (1x500mL poly)
duplicate of								
								BC Labs
								S3METALS (1X500mL Poly) Acivity w/ 4NO3

4Q2009 Duplicate

E120.1A & E150.1A

Copy to Analyst, Allen Grayson

Copy of CoC given to TRR

# FIELD TRACKING FORM INFLUENT TO SITE 300 SEWAGE POND

DATE: /c/8/09 TIME: 1415

Lab	COC#
Lab	FGL
CoC #	47109
Ship It #	HAND CARRY

Special Instructions: Semi-Annual Sampling in 1st and 4th Quarters (	Feb & Oct) pH meter calibrated	
Samples should be taken after 1 p.m. during higher flow.	Conductivity meter calibrated	
Print collection time on sample bottles.	DO meter calibrated	
BOD Hold Time 48hr. Conductivity/pH Hold Time 24hr.		

		Field Me	easureme	nts			Samples for Lab Analysis
Location	рН	COND	DO (PPM)	Temp (°C)	Comments	Initials	
3-ISWP-01-OW					CLEME +	K.B.	Analytical Codes:
(Influent to Sewage Pond)	7.8	1450	2.1178M	31.7°C	COMFORT ASIE	C.F.	E120.1A & E150.1A (Conductivity/pH)
		w/Si	//			M	(2 X 250-mL poly)
							SM5210B-A (BOD)
3-WSWP-01-OW							(1 X 500-mL poly)
duplicate of							
3-ISWP-01-OW							

4Q2009 Duplicate SM5210B-A

Copy to Analyst, Allen Grayson

Copy of CoC given to TRR

# Chain of Custody

EPD: EMAD/PRAD/ESPD	Access/COC #: 47108	Analytical Lab : BCLABS-BAK	Additional Instructions:
Lawrence Livermore National Laboratory	Document Control #: 47108	TAT: 20d	
P.O. Box 808 L-629	Requester/LLNL Analyst: A. Grayson	Analytical Lab Log #:	
Livermore, CA 94551	Organization / Sampler: EPD / brunckhorst2	Project/Network: WDRPOND	
	PCI Project #: 32424	LLNL Acct #: 3297-41	
Work Authorized By: EPD	PCI Task #: 1.3.2.2.5.6	Release #: UNICARD	
TRR Approver:	Fax/Email #1:swanson15@llnl.gov	Fax/Email #2:	
Project Info:	DMT Additional Copies:		

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-ESWP-01-OW	10/08/2009 14:40	SW	Р	1	WDR	S3METALS	ALL	
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Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1	LLNL/EPD			2			
2				3			
3				4			
4				5			

# Chain of Custody

EPD: EMAD/PRAD/ESPD Lawrence Livermore National Laboratory P.O. Box 808 L-629 Livermore, CA 94551

Work Authorized By:	EPD
TRR Approver:	
Project Info:	

Access/COC #: 47109	Analytical Lab : FRUITGROWL
Document Control #: 47109	TAT:20d
Requester/LLNL Analyst: A. Grayson	Analytical Lab Log #:
Organization / Sampler: EPD / brunckhorst2	Project/Network: WDRPOND
PCI Project #: 32424	LLNL Acct #:3297-41

PCI Task #: 1,3,2,2,5,6
Fax/Email #1: swanson15@llnl.gov
DMT Additional Copies:

ra1:20d
ytical Lab Log #:
Project/Network:WDRPOND
LLNL Acct #:3297-41
Release #:UNICARD
Fax/Email #2:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-ESWP-01-OW	10/08/2009 14:40	SW	Ρ	1	WDR	E120.1A	ALL _	
3-ESWP-01-OW	10/08/2009 14:40	SW	P	1	WDR _	E150.1A	ALL	
3-ESWP-01-OW	10/08/2009 14:40	SW	G	1	WDR	E360.1	ALL	
3-ESWP-01-OW	10/08/2009 14:40	SW	PO	1	WDR	SM5210B-A	ALL	
3-ESWP-01-OW	10/08/2009 14:40	SW	Р	1	WDR	SM9221	ALL	Use 20 or more
								tubes: OK if
								bubbles are
								present
3-ISWP-01-OW	10/08/2009 14:15	SW	Р	1	<u> WDR</u>	E120.1A	ALL	
3-ISWP-01-OW	10/08/2009 14:15	SW	Р	1	WDR	E150.1A	ALL	
3-ISWP-01-OW	10/08/2009 14:15	SW	PO	1	WDR	SM5210B-A	ALL	
3-WSWP-01-OW	10/08/2009 14:15	SW	PO	1	WDR	SM5210B-A	ALL	
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		<u> </u>	<u></u>	<u> </u>	<u> </u>			

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1	LLNL/EPO		2				
2							
3			[4			ļ	
4			5				

# FIELD TRACKING FORM EAST END OF SITE 300 SEWAGE POND

1/			
DATE: 10/15/09			

Lab	FGL	ВС
CoC#		47244
Ship It #		129427

Special Instructions: Semi-Annual Sampling in 1st and 4th Quarters (Feb & Oct)

TIME: 13:45

Samples must be taken after 1 p.m.
Print collection time on sample bottles.

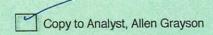
DO/conductivity/pH hold time 24 hr.

	Field Measurements							Samples for Lab Analysis		
Location	рН	COND	Depth	DO (PPM)	Temp (°C)	Comments	Initials	Analytical Codes:		
3-ESWP-01-OW						for HEX chron		FGLAB		
(East end of Sewage Pond)						for HEX chron	1	E360.1 DO (1x500-mL glass, NO head space)		
						only		E120.1A & E150.1A Conductivity/pH		
							KB	(2x250-mL poly)		
								SM9221 Total, Fecal Coliform (1x250mL) 6hr hold		
3-WSWP-01-OW								SM5210B-A BOD (1x500mL poly)		
duplicate of										
								BC Labs		
								S3METALS (1X500mL Poly)		

Re-Sample for HEX chrome only

4Q2009 Duplicate

E120.1A & E150.1A



Copy of CoC given to TRR

# **Chain of Custody**

EPD: EMAD/PRAD/ESPD	Access/COC #: 47244	Analytical Lab: BCLABS-BAK	Additional Instructions:
Lawrence Livermore National Laboratory	Document Control #: 47244	TAT: 20d	
P.O. Box 808 L-629	Requester/LLNL Analyst: A. Grayson	Analytical Lab Log #:	
Livermore, CA 94551	Organization / Sampler: EPD / brunckhorst2	Project/Network: WDRPOND	
Land to the second seco	PCI Project #: 32424	LLNL Acct #: 3297-41	
Work Authorized By: EPD	PCI Task #: 1.3.2.2.5.6	Release #: UNICARD	
TRR Approver:	Fax/Email #1:swanson15@llnl.gov	Fax/Email #2:	
Project Info:	DMT Additional Copies:		

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-ESWP-01-OW	10/15/2009 13:45	SW	Р	1	WDR	S3METALS	ALL	for Hex chrome only
			-		and Summer			
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		-	+					
		-	+	+			-	
		-	_	1				
		1	1	1			-	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
Mal Lochhit	LLNL/EPD	10/15/2009	1600	2			
2				3			
3				4			
4				5			

**Chain of Custody** 

DMT Additional Copies:

1	EPD: EMAD/PRAD/ESPD
ļ	Lawrence Livermore National Laboratory
	P.O. Box 808 L-629
	Livermore, CA 94551

Work Authorized By: EPD
TRR Approver:
Project Info:

Access/COC #: 47108	Analytical Lab : BCLABS-BAK		_	Additional Instructions
Document Control #: 47108	TAT:20d	٠١١٦	₹T	
Requester/LLNL Analyst: A. Grayson	Analytical Lab Log #: 0억 (34 있기	III	${ m I\hspace{1em}I}$	
Organization / Sampler: EPD / brunckhorst2	Project/Network: WDRPOND	Ш	$\coprod$	1 OCT 2 7 2009 115
PCI Project #: 32424	LLNL Acct #:3297-41		$\perp$	
PCI Task #:1.3.2.2.5.6	Release #: UNICARD			
Fay/Fmail #1-swanson15@llnl.gov	Fay/Fmail #2*	EN	πRΩ	MMENTAL PROTECTION DEPARTMENT

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-ESWP-01-ÖW ~ {	10/08/2009 14:40	SW	Р	1	WDR	S3METALS	ALL	
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Belingvished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 Sand brocklage	LLNL/EPD	10/8/49	1545	2 Kgs Viday	BCLAB	10/8/09	4630
2 Loss Wickey	BCLAB	10/8/09	1810	3 P ( Luy - )	BU	075.04	18 10
3 Pikuna	BCL	10809	2105	T4 MINA	Byah	10/8/04	705
4				5			

C B O B O B F

DATA MANAGEMENT

#### CASE NARRATIVE

Page 1

COC 47108

Date: 10/26/09

Laboratory Number: 09-13427

BC Laboratory Number	Sampling Date	LLNL Sample Identification
09-13427-01	10/08/2009@14:40	3-ESWP-01-OW

#### I. HOLDING TIMES

Sample was prepared and analyzed within regulatory holding times.

#### II. CALIBRATION

Initial calibrations met established criteria.

Initial calibration verifications (ICV) met established criteria.

The Continuing Calibration Verification (CCV) met established criteria

#### III. BLANKS

Initial and continuing calibration blanks were performed at required frequencies. No contaminants were detected in the calibration blanks.

Method blanks were prepared and analyzed at required frequencies.

#### IV. LABORATORY CONTROL SAMPLES

Laboratory Control Sample (LCS) analyses were performed at required frequencies. All LCS parameters were within quality control (QC) limits.

#### V. MATRIX SPIKES

Matrix spike analyses were performed at required frequencies. Accuracy and precision requirements were met. The sample concentrations for Total Recoverable Calcium and Total Recoverable Zinc are more than 4 times the spike level. The QC – Precision & Accuracy report has been flagged accordingly.

#### VI. DISCUSSION

Sincerely,

Christina Herndon Project Manager



Date of Report: 10/23/2009

TSG DMT, L-629

Lawrence Livermore National Laboratory P.O. Box 808, L629 Livermore, CA 94551

RE:

SPECIAL-S3

BC Work Order: 0913427

Invoice ID:

B070028

Enclosed are the results of analyses for samples received by the laboratory on 10/8/2009. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Christina Herndon

Client Service Rep

Authorized Signature

BC LABORATORIES INC.		S	AMPL	E RECE	PT FOR	M	Rev. No. 12	06/24/08	Page [	Of\	
Submission #: 0913927											
SHIPPING INF Federal Express		Delive	ry 🗆			Ice Ches	,		ie 🗆	cify)	
Refrigerant: Ice ☐ Blue Ice	e 🗹 No	ne 🗆	0	ther 🗆	Comme	nts:		· · · · · · · · · · · · · · · · · · ·			
Custody Seals Ice Chest ☐	Conta			None	Comm						
All samples received? Yes ( No □	All sam	ples co	ontaine	rs intact?	Yes p No	<b>0</b>	Descrip	tion(s) mat		′esp No (	
COC Received				Container:			eter ID: <u>***</u>	1 <u>080</u>		e <u>10 8 09</u> nit <u></u>	
SAMPLE CONTAINERS	1		2	3	4	SAMPLI 5	E NUMBERS 6	7	8	- e	10
QT GENERAL MINERAL/ GENERAL PHYSIC	AL		***************************************		-		<u> </u>				
PT PE UNPRESERVED											
OT INORGANIC CHEMICAL METALS											
PT INORGANIC CHEMICAL METALS	A										
PT CYANIDE											
PT NITROGEN FORMS			***								
PT TOTAL SULFIDE						· · · · · · · · · · · · · · · · · · ·					
20z. NITRATE / NITRITE		`				-					
PT TOTAL ORGANIC CARBON											
PT TOX	,										
PT CHEMICAL OXYGEN DEMAND											
PtA PHENOLICS											
40ml VOA VIAL TRAVEL BLANK											
40ml VOA VIAL	(		( )	{	(	(	) ()	{ }	( )	( )	( )
QT EPA 413.1, 413.2, 418.1											
PT ODOR											
RADIOLOGICAL									•		
BACTERIOLOGICAL											
40 ml VOA VIAL- 504											
OT EPA 508/608/8080		<u>.</u>							Street, Atomic		
OT EPA 515.1/8150					714.4		CHK	BY	FISIG.	MOLTUE	
OT EPA 525		-+-	HORT		ig TIM	SS			y West.		
OT EPA 525 TRAVEL BLANK			NO	, NO <sub>3</sub>	<del>-0P</del>	<u> </u>	119,		0110	-OUT	
100ml EPA 547			Clو	BOD	MBAS	COT	L		300	-001	
(00ml EPA 531.1	L.										
QT EPA 548											
QT EPA 549											
OT EPA 632											
OT EPA 8015M											
T AMBER											
OZ. JAR											
2 OZ. JAR											
OIL SLEEVE											
CB VIAL											
LASTIC BAG											
ERROUS IRON				,							
NCORE			]								
mments. No unovesenzed to to	al lanc	Muces	M .								

Comments: No Unpreserved to test nex unvurie.

Sample Numbering Completed By: \( \frac{1}{10} \)

A = Actual / C = Corrected



P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

## **Laboratory / Client Sample Cross Reference**

Laboratory **Client Sample Information** Document Control Number: 47108 **COC Number:** 47108 Receive Date: 10/08/2009 21:05 0913427-01 10/08/2009 14:40 Sample Matrix: SW **Project Number:** WDRPOND Sampling Date: Requestor: A. Grayson Sampling Location: 3-ESWP-01-OW Sample Depth: Sampling Point: 3-ESWP-01-OW Sample Matrix: Water Sample Filtered in Field: N Sampled By: brunkhorst2 of LLNL



P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

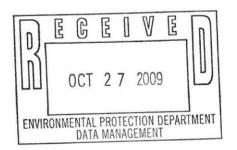
Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

# Water Analysis (General Chemistry)

BCL Sample ID: 091342	7-01	Client Sampl	e Name:	WDRPOND,	3-ESWF	2-01-OW,	3-ESWP-01-0	W, 10/8/2	2009 2:4	0:00PM, b	orunkhors	12			
				Prep		Prep	Run		Instru-		QC	CCV	LLNL	LLNL	Lab
Constituent	Resu	ılt Units	PQL	Method M	lethod	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Ref ID	Method	Code	Quals
Total Recovera <mark>ble Calcium</mark>	32	mg/L	1.0	EPA 200.2 EP	A-200.7	10/12/09	10/15/09 10:00	JRG	PE-OP2	2	BSJ0618	0912142-2	S3METAL S	1700	A01
Total Recoverab <mark>le Magnesium</mark>	20	mg/L	1.0	EPA 200.2 EP	A-200.7	10/12/09	10/15/09 10:00	JRG	PE-OP2	2	BSJ0618	0912142-2	S3METAL S	5500	A01
Total Recoverab <mark>le Sodium</mark>	1800	mg/L	22	EPA 200.2 EP	A-200.7	10/12/09	10/15/09 10:00	JRG	PE-OP2	2	BSJ0618	0912142-2	S3METAL S	7850	A01
Total Recoverab <mark>le Potassium</mark>	100	mg/L	2.0	EPA 200.2 EP	PA-200.7	10/12/09	10/15/09 10:00	JRG	PE-OP2	2	BSJ0618	0912142-2	S3METAL S	7050	A01



P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

# Water Analysis (Metals)

BCL Sample ID: 0913427-	U1   Cli	ent Sample	e Name:	WDRPON	D, 3-ESW	2-01-OW,			/V, 10/8/2		U:00PM, I	orunkhors				
				Prep		Prep	Run			Instru-		QC	CCV	LLNL	LLNL	Lab
Constituent	Result	Units	PQL	Method	Method	Date	Date/Ti	me	Analyst	ment ID	Dilution	Batch ID	Ref ID	Method	Code	Quals
Total Recoverable Aluminum	ND	mg/L	0.10	EPA 200.2	EPA-200.7	10/12/09	10/15/09	10:00	JRG	PE-OP2	2	BSJ0618	0912142-2	S3METALS	0313	A01
Total Recoverable Arsenic	ND	mg/L	0.010	EPA 200.2	EPA-200.8	10/14/09	10/22/09	16:59	JDC	PE-EL1	5	BSJ0770	0912364-1	S3METALS	0450	A10
Total Recoverable Barium	0.13	mg/L	0.12	EPA 200.2	EPA-200.8	10/14/09	10/22/09	16:59	JDC	PE-EL1	5	BSJ0770	0912364-1	S3METAL S	0475	A10
Total Recoverable Boron	7.4	mg/L	0.20	EPA 200.2	EPA-200.7	10/12/09	10/15/09	10:00	JRG	PE-OP2	2	BSJ0618	0912142-2	S3METAL S	1400	A01
Total Recoverable Cadmium	ND	mg/L	0.25	EPA 200.2	EPA-200.8	10/14/09	10/22/09	16:59	JDC	PE-EL1	5	BSJ0770	0912364-1	S3METALS	1650	A10
Total Recoverable Chromium	0.0013	mg/L	0.0010	EPA 200.2	EPA-218.2	10/14/09	10/14/09	14:30	DIW	V802	1	BSJ0785	0911922-1	S3METAL S	2450	
Total Recoverable Copper	0.0077	mg/L	0.0050	EPA 200.2	EPA-200.8	10/14/09	10/22/09	16:59	JDC	PE-EL1	5	BSJ0770	0912364-1	S3METAL S	2800	A10
Total Recoverable Iron	0.26	mg/L	0.20	EPA 200.2	EPA-200.7	10/12/09	10/15/09	10:00	JRG	PE-OP2	2	BSJ0618	0912142-2	S3METAL S	5350	A01
Total Recoverable Lead	ND	mg/L	0.025	EPA 200.2	EPA-200.8	10/14/09	10/22/09	16:59	JDC	PE-EL1	5	BSJ0770	0912364-2	S3METALS	5450	A10
Total Recoverable Manganese	ND	mg/L	0.060	EPA 200.2	EPA-200.7	10/12/09	10/15/09	10:00	JRG	PE-OP2	2	BSJ0618	0912142-2	S3METALS	5550	A01
Total Recoverable Molybdenum	0.056	mg/L	0.050	EPA 200.2	EPA-200.7	10/12/09	10/15/09	10:00	JRG	PE-OP2	2	BSJ0618	3 0912142-1	S3METAL S	5775	A01
Total Recoverable Nickel	ND	mg/L	0.010	EPA 200.2	EPA-200.8	10/14/09	10/22/09	16:59	JDC	PE-EL1	5	BSJ0770	0912364-	1 S3METALS	5850	A10
Total Recoverable Selenium	ND	mg/L	0.010	EPA 200.2	2 EPA-200.8	10/14/09	10/22/09	16:59	) JDC	PE-EL1	5	BSJ0770	0912364-	1 S3METALS	7600	A10
Total Recoverable Vanadium	ND	mg/L	0.10	EPA 200.2	2 EPA-200.8	10/14/09	10/22/09	16:59	) JDC	PE-EL1	5	BSJ0770	0 0912364-	1 S3METALS	8875	A10
Total Recoverable Zinc	ND	mg/L	0.10	EPA 200.2	2 EPA-200.8	10/14/09	10/22/09	16:59	) JDC	PE-EL1	5	BSJ077	0 0912364-	1 S3METALS	9050	A10



P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

# Water Analysis (General Chemistry)

## **Quality Control Report - Precision & Accuracy**

										Contr	ol Limits	
			Source	Source		Spike			Percent		Percent	t
Constituent	Batch ID	QC Sample Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recover	y Lab Quals
Total Recoverable Calcium	BSJ0618	Duplicate	0913391-01	53.947	58.933		mg/L	8.8		20		
		Matrix Spike	0913391-01	53.947	70.368	10.000	mg/L		164		75 - 125	A03
		Matrix Spike Duplicat	te 0913391-01	53.947	70.262	10.000	mg/L	0.6	163	20	75 - 125	A03
Total Recoverable Magnesium	BSJ0618	Duplicate	0913391-01	14.279	15.536		mg/L	8.4		20		
		Matrix Spike	0913391-01	14.279	26.742	10.000	mg/L		125		75 - 125	
		Matrix Spike Duplica	te 0913391-01	14.279	26.663	10.000	mg/L	0.6	124	20	75 - 125	
Total Recoverable Sodium	BSJ0618	Duplicate	0913391-01	29.885	32.124		mg/L	7.2		20		
		Matrix Spike	0913391-01	29.885	42.175	10.000	mg/L		123		75 - 125	
		Matrix Spike Duplica	te 0913391-01	29.885	41.730	10.000	mg/L	3.7	118	20	75 - 125	
Total Recoverable Potassium	BSJ0618	Duplicate	0913391-01	7.4252	7.9403		mg/L	6.7		20		
		Matrix Spike	0913391-01	7.4252	18.705	10.000	mg/L		113		75 - 125	
		Matrix Spike Duplica	te 0913391-01	7.4252	18.514	10.000	mg/L	1.7	111	20	75 - 125	

P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

## **Water Analysis (Metals)**

## **Quality Control Report - Precision & Accuracy**

										Contro	ol Limits
			Source	Source		Spike			Percent		Percent
Constituent	Batch ID	QC Sample Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery Lab Quals
Total Recoverable Aluminum	BSJ0618	Duplicate	0913391-01	0.054947	0.057194		mg/L	4.0		20	
		Matrix Spike	0913391-01	0.054947	1.1724	1.0000	mg/L		112		75 - 125
		Matrix Spike Duplicat	e 0913391-01	0.054947	1.1591	1.0000	mg/L	1.2	110	20	75 - 125
Total Recoverable Boron	BSJ0618	Duplicate	0913391-01	0.035168	ND		mg/L			20	
		Matrix Spike	0913391-01	0.035168	1.1109	1.0000	mg/L		108		75 - 125
		Matrix Spike Duplica	te 0913391-01	0.035168	1.0971	1.0000	mg/L	1.3	106	20	75 - 125
Total Recoverable Iron	BSJ0618	Duplicate	0913391-01	0.14304	0.14717		mg/L	2.8		20	
		Matrix Spike	0913391-01	0.14304	1.2934	1.0000	mg/L		115		75 - 125
		Matrix Spike Duplica	te 0913391-01	0.14304	1.2883	1.0000	mg/L	0.4	115	20	75 - 125
Total Recoverable Manganese	BSJ0618	Duplicate	0913391-01	0.0040294	ND		mg/L			20	
		Matrix Spike	0913391-01	0.0040294	0.56437	0.50000	mg/L		112		75 - 125
		Matrix Spike Duplica	te 0913391-01	0.0040294	0.55886	0.50000	mg/L	1.0	111	20	75 - 125
Total Recoverable Molybdenum	BSJ0618	Duplicate	0913391-01	0.034166	ND		mg/L			20	
		Matrix Spike	0913391-01	0.034166	0.25212	0.20000	mg/L		109		75 - 125
		Matrix Spike Duplica	te 0913391-01	0.034166	0.24548	0.20000	mg/L	3.1	106	20	75 - 125
Total Recoverable Arsenic	BSJ0770	Duplicate	0913472-03	0.0042570	0.0037860		mg/L	11.7		20	
		Matrix Spike	0913472-03	0.0042570	0.11192	0.10000	mg/L		108		70 - 130
		Matrix Spike Duplica	ite 0913472-03	0.0042570	0.11181	0.10000	mg/L	0.1	108	20	70 - 130
Total Recoverable Barium	BSJ0770	Duplicate	0913472-03	0.026026	0.025758		mg/L	1.0		20	
		Matrix Spike	0913472-03	0.026026	0.067547	0.040000	mg/L		104		70 - 130
		Matrix Spike Duplica	ate 0913472-03	0.026026	0.068486	0.040000	mg/L	2.2	106	20	70 - 130
Total Recoverable Cadmium	B\$J0770	Duplicate	0913472-03	0.000050000	ND		mg/L			20	
		Matrix Spike	0913472-03	0.000050000	0.042684	0.040000	mg/L		107		70 - 130
		Matrix Spike Duplic	ate 0913472-03	0.000050000	0.042240	0.040000	mg/L	1.0	105	20	70 - 130
Total Recoverable Copper	BSJ0770	Duplicate	0913472-03	0.092085	0.090728		mg/L	1.5		20	
. a.m a.m a.m. a. a.m. a.		Matrix Spike	0913472-03	0.092085	0.18638	0.10000	mg/L		94.3		70 - 130
		Matrix Spike Duplic	ate 0913472-03	0.092085	0.18904	0.10000	mg/L	2.8	97.0	20	70 - 130

P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

## **Water Analysis (Metals)**

## **Quality Control Report - Precision & Accuracy**

										Contro		
			Source	Source		Spike			Percent		Percent	
Constituent	Batch ID	QC Sample Type	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Lab Quals
Total Recoverable Lead	BSJ0770	Duplicate	0913472-03	0.062816	0.054746		mg/L	13.7		20		
		Matrix Spike	0913472-03	0.062816	0.15927	0.10000	mg/L		96.5		70 - 130	
		Matrix Spike Duplicat	e 0913472-03	0.062816	0.15974	0.10000	mg/L	0.5	96.9	20	70 - 130	
Total Recoverable Nickel	BSJ0770	Duplicate	0913472-03	0.023793	0.023809		mg/L	0.1		20		
		Matrix Spike	0913472-03	0.023793	0.12074	0.10000	mg/L		96.9		70 - 130	
		Matrix Spike Duplicat	e 0913472-03	0.023793	0.12166	0.10000	mg/L	0.9	97.9	20	70 - 130	
Total Recoverable Selenium	BSJ0770	Duplicate	0913472-03	0.0013500	ND		mg/L			20		
		Matrix Spike	0913472-03	0.0013500	0.10378	0.10000	mg/L		102		70 - 130	
		Matrix Spike Duplica	te 0913472-03	0.0013500	0.10521	0.10000	mg/L	1.4	104	20	70 - 130	
Total Recoverable Vanadium	BSJ0770	Duplicate	0913472-03	0.0091280	0.0092680		mg/L	1.5		20		
		Matrix Spike	0913472-03	0.0091280	0.048255	0.040000	mg/L		97.8		70 - 130	
		Matrix Spike Duplica	te 0913472-03	0.0091280	0.049208	0.040000	mg/L	2.4	100	20	70 - 130	
Total Recoverable Zinc	BSJ0770	Duplicate	0913472-03	1.0132	0.87353		mg/L	14.8		20		
		Matrix Spike	0913472-03	1.0132	0.97723	0.10000	mg/L		-36.0		70 - 130	A03
		Matrix Spike Duplica	te 0913472-03	1.0132	1.0186	0.10000	mg/L	271	5.4	20	70 - 130	A03
Total Recoverable Chromium	BSJ0785	Duplicate	0913427-01	0.0013200	0.0015100		mg/L	13.4		20		
-		Matrix Spike	0913427-01	0.0013200	0.024440	0.020000	mg/L		116		80 - 120	
		Matrix Spike Duplica	te 0913427-01	0.0013200	0.021160	0.020000	mg/L	15.3	99.2	20	80 - 120	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,



P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

## Water Analysis (General Chemistry)

### **Quality Control Report - Laboratory Control Sample**

				Control Limits							
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	Percent RPD Recovery	RPD	Lab Quals
Total Recoverable Calcium	BSJ0618	BSJ0618-BS1	LCS	10.789	10.000	0.10	mg/L	108	85 - 115		
Total Recoverable Magnesium	BSJ0618	BSJ0618-BS1	LCS	11.306	10.000	0.050	mg/L	113	85 - 115		
Total Recoverable Sodium	BSJ0618	BSJ0618-BS1	LCS	10.982	10.000	0.50	mg/L	110	85 - 115		
Total Recoverable Potassium	BSJ0618	BSJ0618-BS1	LCS	10.641	10.000	1.0	mg/L	106	85 - 115		



Lawrence Livermore National Laboratory P.O. Box 808, L629

Livermore, CA 94551

Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

# **Water Analysis (Metals)**

## **Quality Control Report - Laboratory Control Sample**

									Control Limits				
Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL_	Units	Percent Recovery	RPD	Percent Recovery	RPD	Lab Quals	
Total Recoverable Aluminum	BSJ0618	BSJ0618-BS1	LCS	1.0696	1.0000	0.050	mg/L	107		85 - 115			
Total Recoverable Boron	BSJ0618	BSJ0618-BS1	LCS	1.0689	1.0000	0.10	mg/L	107		85 - 115			
Total Recoverable Iron	BSJ0618	BSJ0618-BS1	LCS	1.1179	1.0000	0.050	mg/L	112		85 - 115			
Total Recoverable Manganese	BSJ0618	BSJ0618-BS1	LCS	0.56246	0.50000	0.010	mg/L	112		85 - 115			
Total Recoverable Molybdenum	BSJ0618	BSJ0618-BS1	LCS	0.21610	0.20000	0.050	mg/L	108		85 - 115			
Total Recoverable Arsenic	BSJ0770	BSJ0770-BS1	LCS	0.10244	0.10000	0.0020	mg/L	102	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	85 - 115			
Total Recoverable Barium	BSJ0770	BSJ0770-BS1	LCS	0.042650	0.040000	0.0010	mg/L	107		85 - 115			
Total Recoverable Cadmium	BSJ0770	BSJ0770-BS1	LCS	0.041964	0.040000	0.0010	mg/L	105		85 - 115			
Total Recoverable Copper	BSJ0770	BSJ0770-BS1	LCS	0.10488	0.10000	0.0020	mg/L	105		85 - 115			
Total Recoverable Lead	BSJ0770	BSJ0770-BS2	LCS	0.10763	0.10000	0.0010	mg/L	108		85 - 115			
Total Recoverable Nickel	BSJ0770	BSJ0770-BS1	LCS	0.10459	0.10000	0.0020	mg/L	105		85 - 115			
Total Recoverable Selenium	BSJ0770	BSJ0770-BS1	LCS	0.098627	0.10000	0.0020	mg/L	98.6		85 - 115			
Total Recoverable Vanadium	BSJ0770	BSJ0770-BS1	LCS	0.041496	0.040000	0.0030	mg/L	104		85 - 115	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Total Recoverable Zinc	BSJ0770	BSJ0770-BS2	LCS	0.11451	0.10000	0.0050	mg/L	115		85 - 115			
Total Recoverable Chromium	BSJ0785	BSJ0785-BS1	LCS	0.020120	0.020000	0.0020	mg/L	101		85 - 115			
								····					



P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

# Water Analysis (General Chemistry)

### **Quality Control Report - Method Blank Analysis**

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Total Recoverable Calcium	BSJ0618	BSJ0618-BLK1	ND	mg/L	0.10		
Total Recoverable Magnesium	B\$J0618	BSJ0618-BLK1	ND	mg/L	0.050		
Total Recoverable Sodium	BSJ0618	BSJ0618-BLK1	ND	mg/L	0.50		
Total Recoverable Potassium	BSJ0618	BSJ0618-BLK1	ND	mg/L	1.0		

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Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

## **Water Analysis (Metals)**

## **Quality Control Report - Method Blank Analysis**

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Total Recoverable Aluminum	BSJ0618	BSJ0618-BLK1	ND	mg/L	0.050		
Total Recoverable Boron	BSJ0618	BSJ0618-BLK1	ND	mg/L	0.10		
Total Recoverable Iron	BSJ0618	BSJ0618-BLK1	ND	mg/L	0.050		
Total Recoverable Manganese	BSJ0618	BSJ0618-BLK1	ND	mg/L	0.010		7111
Total Recoverable Molybdenum	BSJ0618	BSJ0618-BLK1	ND	mg/L	0.025		
Total Recoverable Arsenic	BSJ0770	BSJ0770-BLK1	ND	mg/L	0.0020		
Total Recoverable Barium	BSJ0770	BSJ0770-BLK1	ND	mg/L	0.0010		
Total Recoverable Cadmium	BSJ0770	BSJ0770-BLK1	ND	mg/L	0.0010		
Total Recoverable Copper	BSJ0770	BSJ0770-BLK1	ND	mg/L	0.0020		
Total Recoverable Lead	BSJ0770	BSJ0770-BLK2	ND	mg/L	0.0010		
Total Recoverable Nickel	BSJ0770	BSJ0770-BLK1	ND	mg/L	0.0020		
Total Recoverable Selenium	BSJ0770	BSJ0770-BLK1	ND	mg/L	0.0020		
Total Recoverable Vanadium	BSJ0770	BSJ0770-BLK1	ND	mg/L	0.0030		
Total Recoverable Zinc	BSJ0770	BSJ0770-BLK2	ND	mg/L	0.0050		
Total Recoverable Chromium	BSJ0785	BSJ0785-BLK1	ND	mg/L	0.0010		



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Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

## Water Analysis (General Chemistry)

## **Quality Control Report - Instrumental Parameters**

						True			Control	
Constituent	CCV Ref ID	QC Sample ID	Sample Type	Run Date	Result	Value	Units	%Found	Limits	Lab Quals
Total Recoverable Calcium	0912142-2	0912142-ICV1	ICV	10/15/2009 07:46	48.473	50.000	mg/L	96.9	95 - 105	
		0912142-CCV2	CCV, Beginning	10/15/2009 09:36	51.345	-50.000	mg/L	103	90 - 110	
		0912142-CCV3	CCV, Ending	10/15/2009 10:24	50.406	50.000	mg/L	101	90 - 110	
Total Recoverable Magnesium	0912142-2	0912142-ICV1	ICV	10/15/2009 07:46	48.845	50.000	mg/L	97.7	95 - 105	
		0912142-CCV2	CCV, Beginning	10/15/2009 09:36	51.915	50.000	mg/L	104	90 - 110	
		0912142-CCV3	CCV, Ending	10/15/2009 10:24	51.160	50.000	mg/L	102	90 - 110	
Total Recoverable Sodium	0912142-2	0912142-ICV1	ICV	10/15/2009 07:46	48.461	50.000	mg/L	96.9	95 - 105	
		0912142-CCV2	CCV, Beginning	10/15/2009 09:36	49.732	50.000	mg/L	99.5	90 - 110	
		0912142-CCV3	CCV, Ending	10/15/2009 10:24	51.368	50.000	mg/L	103	90 - 110	
Total Recoverable Potassium	0912142-2	0912142-JCV1	ICV	10/15/2009 07:46	48.295	50.000	mg/L	96.6	95 - 105	,,,,
		0912142-CCV2	CCV, Beginning	10/15/2009 09:36	50.135	50.000	mg/L	100	90 - 110	
		0912142-CCV3	CCV, Ending	10/15/2009 10:24	49.442	50.000	mg/L	98.9	90 - 110	

P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

# **Water Analysis (Metals)**

### **Quality Control Report - Instrumental Parameters**

Constituent	CCV Ref ID	QC Sample ID	Sample Type	Run Date	Result	True Value	Units	%Found	Control Limits	Lab Quals
Total Recoverable Chromium	0911922-1	0911922-ICV1	ICV	10/14/2009 14:30	9.9600	10.000	ug/L	99.6	95 - 105	
•		0911922-ICV1	CCV, Beginning	10/14/2009 14:30	9.9600	10.000	ug/L	99.6	95 - 105	
		0911922-CCV1	CCV, Ending	10/14/2009 14:30	9.3200	10.000	ug/L	93.2	90 - 110	
Total Recoverable Molybdenum	0912142-1	0912142-ICV1	ICV	10/15/2009 07:46	2.4763	2.5000	mg/L	99.1	95 - 105	
•		0912142-CCV2	CCV, Beginning	10/15/2009 09:36	2.5664	2.5000	mg/L	103	90 - 110	
		0912142-CCV3	CCV, Ending	10/15/2009 10:24	2.6389	2.5000	mg/L	106	90 - 110	
Total Recoverable Aluminum	0912142-2	0912142-ICV1	ICV	10/15/2009 07:46	48.387	50.000	mg/L	96.8	95 - 105	
		0912142-CCV2	CCV, Beginning	10/15/2009 09:36	50.571	50.000	mg/L	101	90 - 110	
		0912142-CCV3	CCV, Ending	10/15/2009 10:24	49.893	50.000	mg/L	99.8	90 - 110	
Total Recoverable Boron	0912142-2	0912142-(CV1	ICV	10/15/2009 07:46	2.4944	2.5000	mg/L	99.8	95 - 105	
		0912142-CCV2	CCV, Beginning	10/15/2009 09:36	2.5394	2.5000	mg/L	102	90 - 110	
		0912142-CCV3	CCV, Ending	10/15/2009 10:24	2.6114	2.5000	mg/L	104	90 - 110	
Total Recoverable Iron	0912142-2	0912142-ICV1	ICV	10/15/2009 07:46	49.363	50.000	mg/L	98.7	95 - 105	
		0912142-CCV2	CCV, Beginning	10/15/2009 09:36	51.546	50.000	mg/L	103	90 - 110	
		0912142-CCV3	CCV, Ending	10/15/2009 10:24	50.758	50.000	mg/L	102	90 - 110	
Total Recoverable Manganese	0912142-2	0912142-ICV1	ICV	10/15/2009 07:46	2.4649	2.5000	mg/L	98.6	95 - 105	
		0912142-CCV2	CCV, Beginning	10/15/2009 09:36	2.5728	2.5000	mg/L	103	90 - 110	
		0912142-CCV3	CCV, Ending	10/15/2009 10:24	2.5383	2.5000	mg/L	102	90 - 110	
Total Recoverable Arsenic	0912364-1	0912364-ICV1	ICV	10/22/2009 09:39	124.64	125.00	ug/L	99.7	90 - 110	
		0912364-CCVE	CCV, Beginning	10/22/2009 16:44	93.690	100.00	ug/L	93.7	90 - 110	
		0912364-CCVF	CCV, Ending	10/22/2009 17:02	96.188	100.00	ug/L	96.2	90 - 110	
Total Recoverable Barium	0912364-1	0912364-ICV1	ICV	10/22/2009 09:39	50.720	50.000	ug/L	101	90 - 110	
· · · · · · · · · · · · · · · · · · ·		0912364-CCVE	CCV, Beginning	10/22/2009 16:44	38.186	40.000	ug/L	95.5	90 - 110	
		0912364-CCVF	CCV, Ending	10/22/2009 17:02	38.022	40.000	ug/L	95.1	90 - 110	
Total Recoverable Cadmium	0912364-1	0912364-ICV1	ICV	10/22/2009 09:39	51.018	50.000	ug/L	102	90 - 110	
, 200. , 1000 70.0010 200111.011	**	0912364-CCVE	CCV, Beginning	10/22/2009 16:44	37.322	40.000	ug/L	93.3	90 - 110	
		0912364-CCVF	CCV, Ending	10/22/2009 17:02	38.690	40.000	ug/L	96.7	90 - 110	



P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

# **Water Analysis (Metals)**

## **Quality Control Report - Instrumental Parameters**

						True			Control	
Constituent	CCV Ref ID	QC Sample ID	Sample Type	Run Date	Result	Value	Units	%Found	Limits	Lab Quals
Total Recoverable Copper	0912364-1	0912364-ICV1	ICV	10/22/2009 09:39	127.70	125.00	ug/L	102	90 - 110	
		0912364-CCVE	CCV, Beginning	10/22/2009 16:44	96.485	100.00	ug/L	96.5	90 - 110	
		0912364-CCVF	CCV, Ending	10/22/2009 17:02	98.607	100.00	ug/L	98.6	90 - 110	
Total Recoverable Nickel	0912364-1	0912364-ICV1	ICV	10/22/2009 09:39	126.72	125.00	ug/L	101	90 - 110	
		0912364-CCVE	CCV, Beginning	10/22/2009 16:44	95.545	100.00	ug/L	95.5	90 - 110	
		0912364-CCVF	CCV, Ending	10/22/2009 17:02	96.927	100.00	ug/L	96.9	90 - 110	
Total Recoverable Selenium	0912364-1	0912364-ICV1	ICV	10/22/2009 09:39	124.46	125.00	ug/L	99.6	90 - 110	
		0912364-CCVE	CCV, Beginning	10/22/2009 16:44	95.408	100.00	ug/L	95.4	90 - 110	
		0912364-CCVF	CCV, Ending	10/22/2009 17:02	98.272	100.00	ug/L	98.3	90 - 110	
Total Recoverable Vanadium	0912364-1	0912364-ICV1	ICV	10/22/2009 09:39	49.831	50.000	ug/L	99.7	90 - 110	
		0912364-CCVE	CCV, Beginning	10/22/2009 16:44	37.804	40.000	ug/L	94.5	90 - 110	
		0912364-CCVF	CCV, Ending	10/22/2009 17:02	37.069	40.000	ug/L	92.7	90 - 110	
Total Recoverable Zinc	0912364-1	0912364-ICV1	ICV	10/22/2009 09:39	125.91	125.00	ug/L	101	90 - 110	
		0912364-CCVE	CCV, Beginning	10/22/2009 16:44	94.174	100.00	ug/L	94.2	90 - 110	
		0912364-CCVF	CCV, Ending	10/22/2009 17:02	96.487	100.00	ug/L	96.5	90 - 110	
Total Recoverable Lead	0912364-2	0912364-ICV1	ICV	10/22/2009 09:39	127,29	125.00	ug/L	102	90 - 110	
		0912364-CCVE	CCV, Beginning	10/22/2009 16:44	94.004	100.00	ug/L	94.0	90 - 110	
		0912364-CCVF	CCV, Ending	10/22/2009 17:02	99.569	100.00	ug/L	99.6	90 - 110	



P.O. Box 808, L629 Livermore, CA 94551 Project: SPECIAL-S3

Project Number: WDRPOND

Project Manager: TSG DMT, L-629

Reported: 10/23/2009 13:26

COC Number: 47108

#### **Notes And Definitions**

CCV Continuing Calibration Verification

ICV Initial Calibration Verification

MDL Method Detection Limit

ND Analyte Not Detected at or above the reporting limit

PQL Practical Quantitation Limit

RPD Relative Percent Difference

A01 PQL's and MDL's are raised due to sample dilution.

A03 The sample concentration is more than 4 times the spike level.

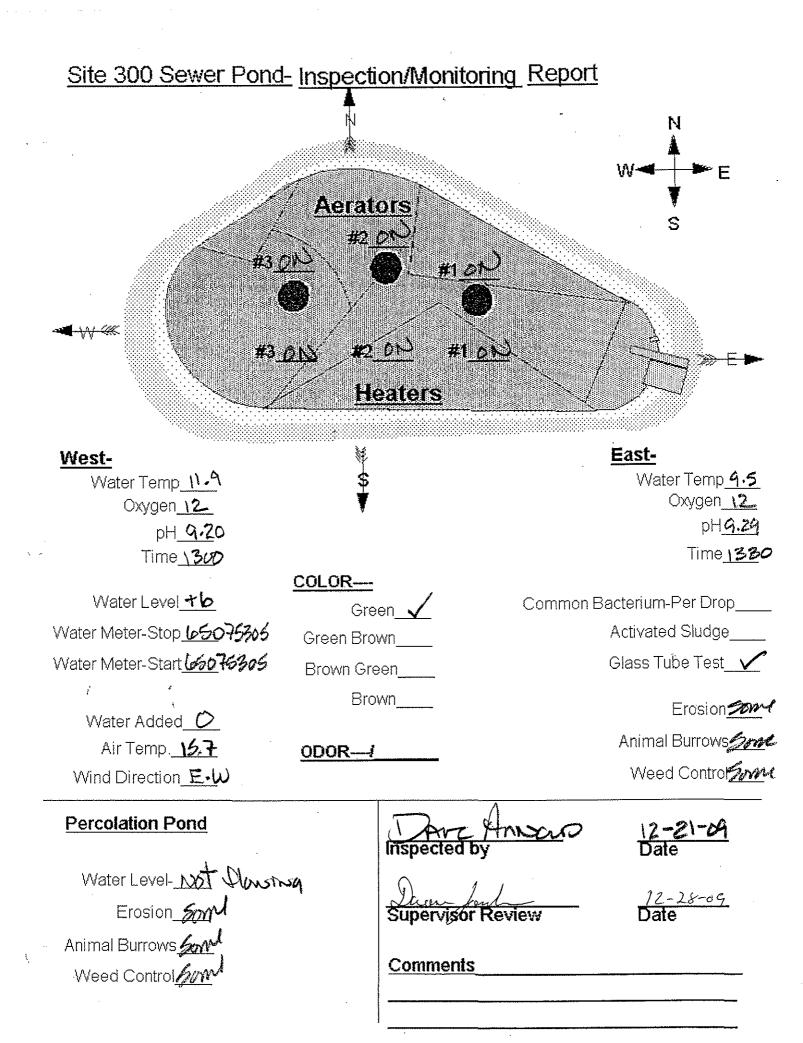
A10 PQL's and MDL's were raised due to matrix interference.

Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A

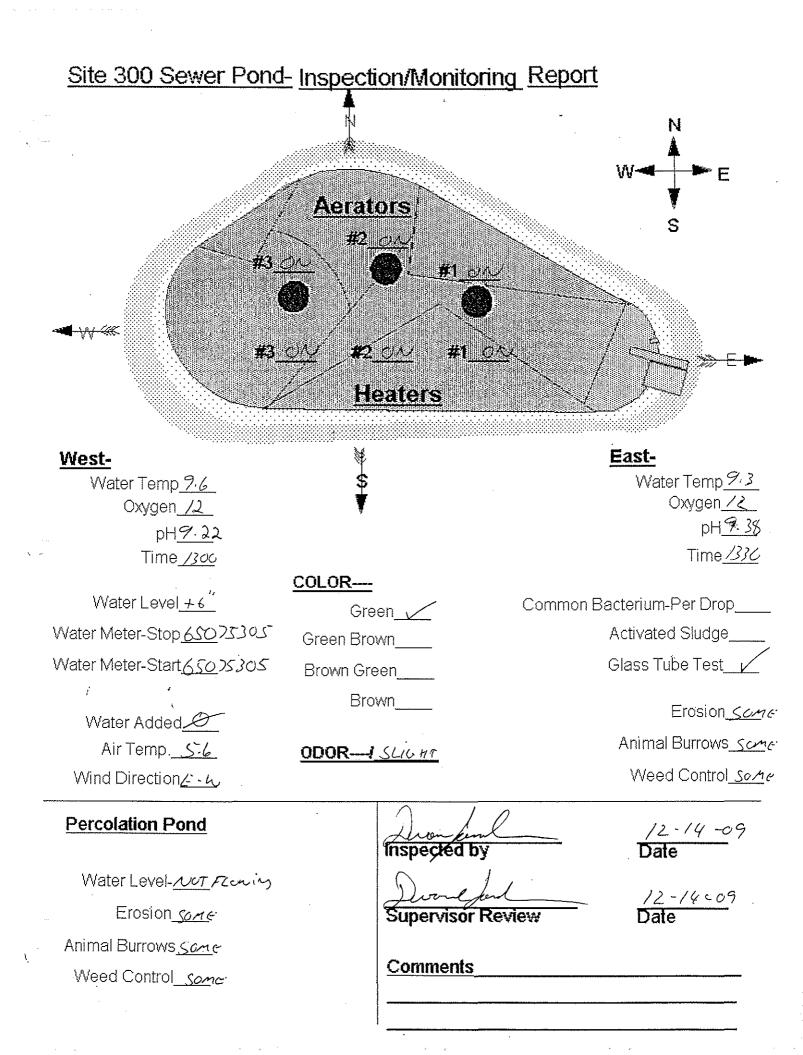
Site 300 Sewer Pond- Inspection/Monitoring Report Aeraiors #2 o n #1 0.2 #2 OA #1 61 Heaters East-West-Water Temp 8.4 Water Temp 8.9 Oxygen\_ /2 Oxygen\_/2\_ pH 9.04 pH 9.14 Time //30 Time //00 COLOR----Water Level ≁6" Common Bacterium-Per Drop Green // Activated Sludge\_\_\_\_ Water Meter-Stop 65025305 Green Brown Glass Tube Test Water Meter-Start 65025305 Brown Green Brown Erosion Some Water Added & Animal Burrows SOMO Air Temp. 10.0 ODOR-1 SUGHT Weed Control Sans Wind Direction NONE **Percolation Pond** Inspected by Water Level- NOT Flowing 12-31-09 Erosion Some Supervisor Review Animal Burrows Same Comments Weed Control Some

Site 300 Sewer Pond- Inspection/Monitoring Report AGRICIE #2 .... **#3** 🔿 #2 0/4 #100 dealers East-West-Water Temp 2.8 Water Temp 8.2 Oxygen /2 Oxygen /2 pH 9.1/ pH 8.95 Time /330 Time / 300 COLOR---Water Level + 6 " Common Bacterium-Per Drop Green\_ ./ Water Meter-Stop65015305 Activated Sludge Green Brown Water Meter-Start 650 75305 Glass Tube Test\_\_\_\_ Brown Green Brown Erosion Scarce Water Added 0 Animal Burrows Some Air Temp. 6.ク ODOR-1 SLIGHT Weed Control Some Wind Direction  $\omega/s$ **Percolation Pond** Inspected by Water Level- NOT FLOWING /2 - 28 - 09 **Date** Erosion Some Animal Burrows Some Comments Weed Control Some

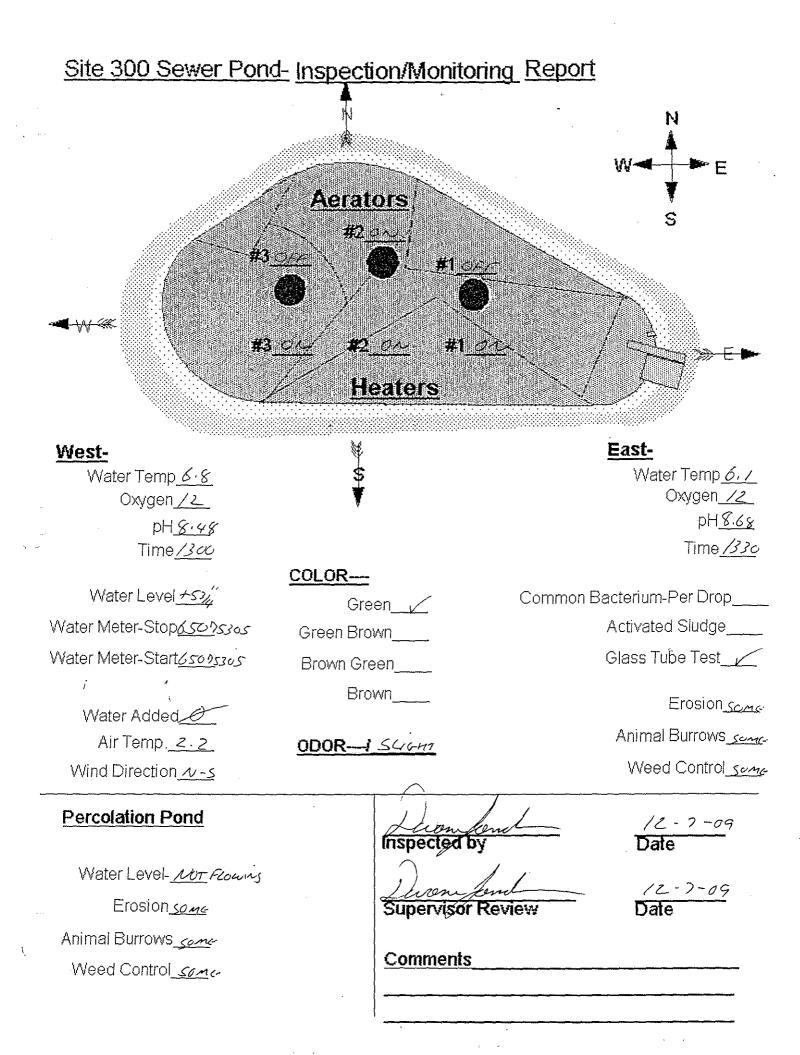
Site 300 Sewer Pond- Inspection/Monitoring Report Aeraiors #2 e). #3 DI-#2 81Ù #1 (5)(4) Heaters East-West-Water Temp 4.5 Water Temp \2.7 Oxygen\_12\_ Oxygen\_\2 pH 4.21 pH 9.17 Time 1350 Time \500 COLOR----Water Level + 6 Common Bacterium-Per Drop Green N Water Meter-Stop 660 75305 Activated Sludge Green Brown Water Meter-Start 65076806. Glass Tube Test 🤸 Brown Green Brown\_\_\_ Erosion gam Water Added D Air Temp. 14.3 Animal Burrows ODOR---/\_ Weed Control Wind Direction E-W **Percolation Pond** Water Level- Plwny Erosion 6m Animal Burrows /pm Comments Weed Control



Site 300 Sewer Pond-Inspection/Monitoring Report N Aerators #2 0~~! #1 o 。 #2 OL **#1** つき Heaters East-West-Water Temp 9.6 Water Temp /2./ Oxygen /2 Oxygen / ) pH9.29 pH 9.16 Time/330 Time /300 COLOR---Water Level ≯ 6 Common Bacterium-Per Drop Green / Activated Sludge Water Meter-Stop 650 7530-5 Green Brown Water Meter-Start & so >53 .5 Glass Tube Test 🗸 Brown Green Brown Erosion Some Water Added () Animal Burrows SOME Air Temp. 16.1 ODOR- SLIGHT Weed Control Some Wind Direction E-W **Percolation Pond** inspected by Water Level-NOT Fromis <u>/2 -/) -</u>09 Date Erosion SOME Supervisor Review Animal Burrows Some Comments Weed Control Same

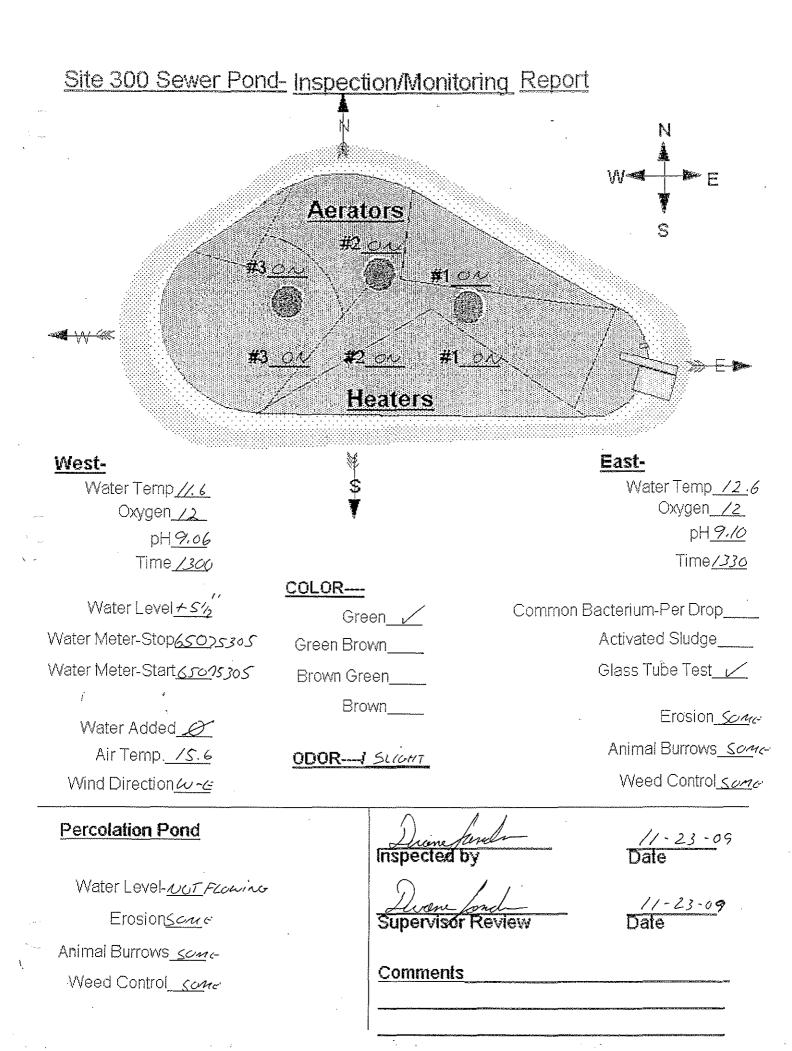


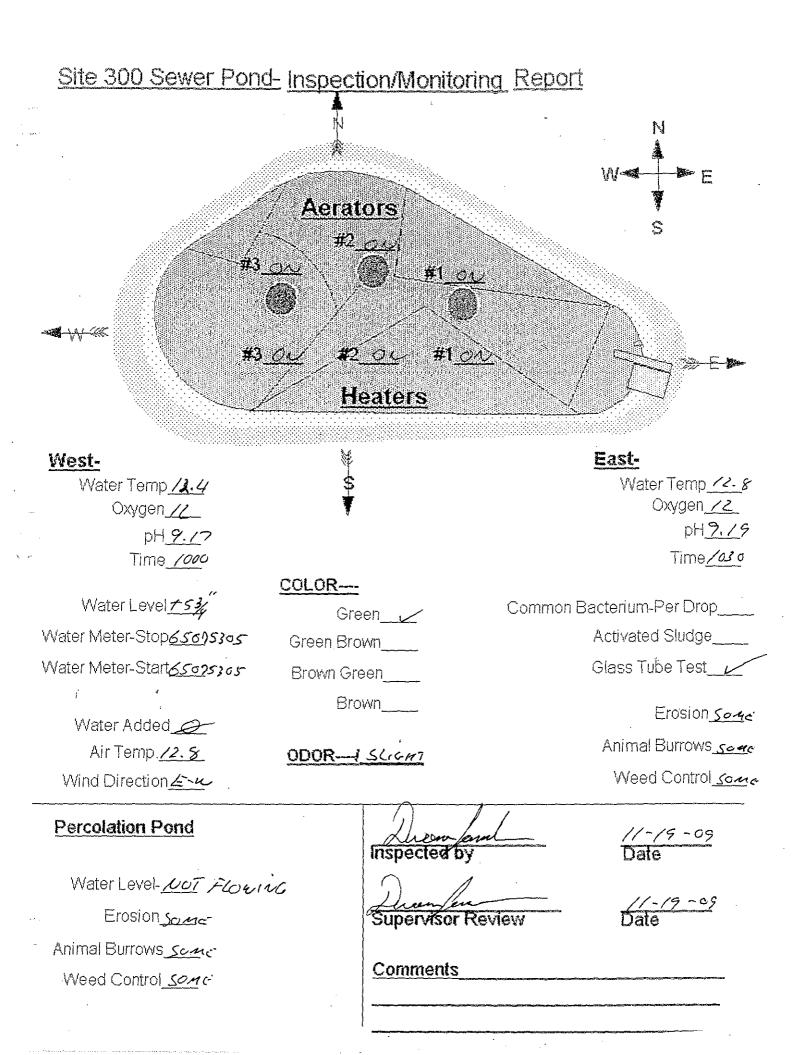
Site 300 Sewer Pond- Inspection/Monitoring Report N Aeralus #2 -/- @ **#1** 0/// #2 #1 ... Heaters East-West-Water Temp 6.9 Water Temp 6.7 Oxygen\_/2\_ Oxygen\_/2 PH 8.64 pH8.52 <u>٥٤٤/</u> Time Time /3ac COLOR---Water Level = 53," Common Bacterium-Per Drop Green // Water Meter-Stop 65095305 Activated Sludge Green Brown Water Meter-Start 65075305 Glass Tube Test 🗸 Brown Green Brown\_\_\_ Erosion Some Water Added Animal Burrows Some Air Temp. 4.4 ODOR-1 SLIGHT Weed Control Scare Wind Direction Nowe **Percolation Pond** Inspected by Water Level- NOT FLOWIS Erosion Some Supervisor Review Animal Burrows Some Comments Weed Control SOMO



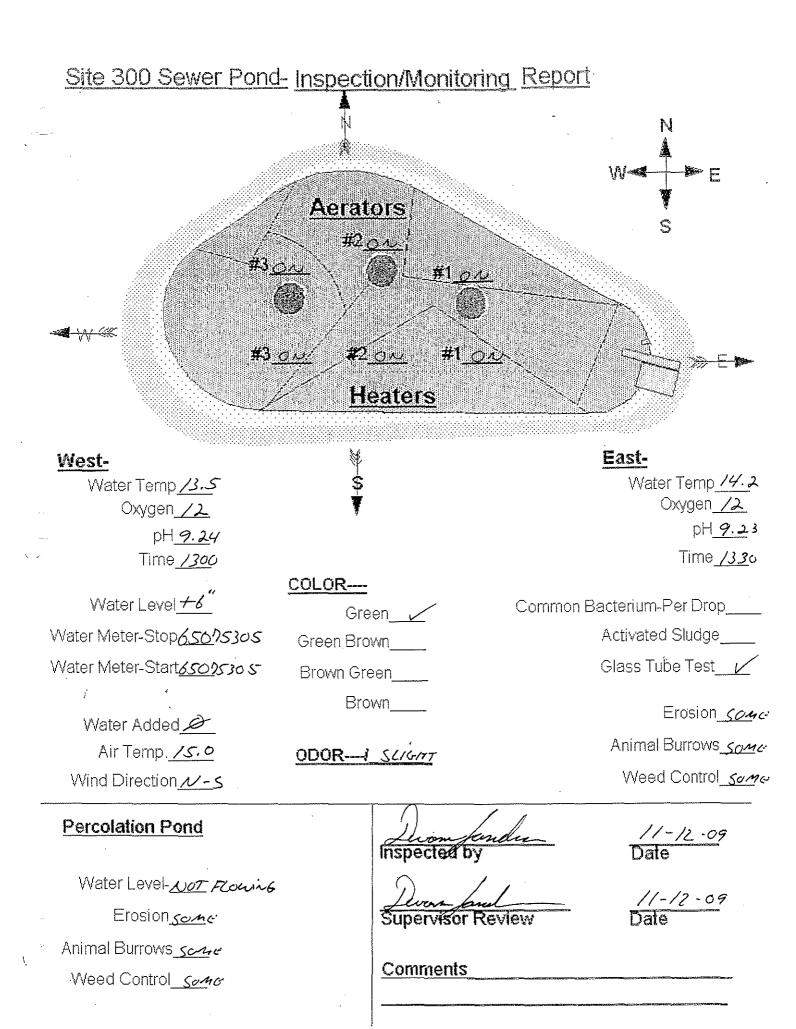
Site 300 Sewer Pond- Inspection/Monitoring Report Acidons #2/7 Heaters West-East-Water Temp 10.0 Water Temp 11.1 Oxygen\_12 Oxygen\_1Z\_ DH 5-77 pH 8.64 Time 1300 Time 1330 COLOR-Water Level +5/2 Common Bacterium-Per Drop Green Water Meter-Stop 105075305 Activated Sludge Green Brown Water Meter-Start 65075505 Glass Tube Test Brown Green Brown Erosion for Water Added Animal Burrows Air Temp. 15.10 ODOR---Weed Control Wind Direction N-5 **Percolation Pond** inspected by Water Level-Erosion Jone Supervisor Review Date Animal Burrows Comments Weed Control

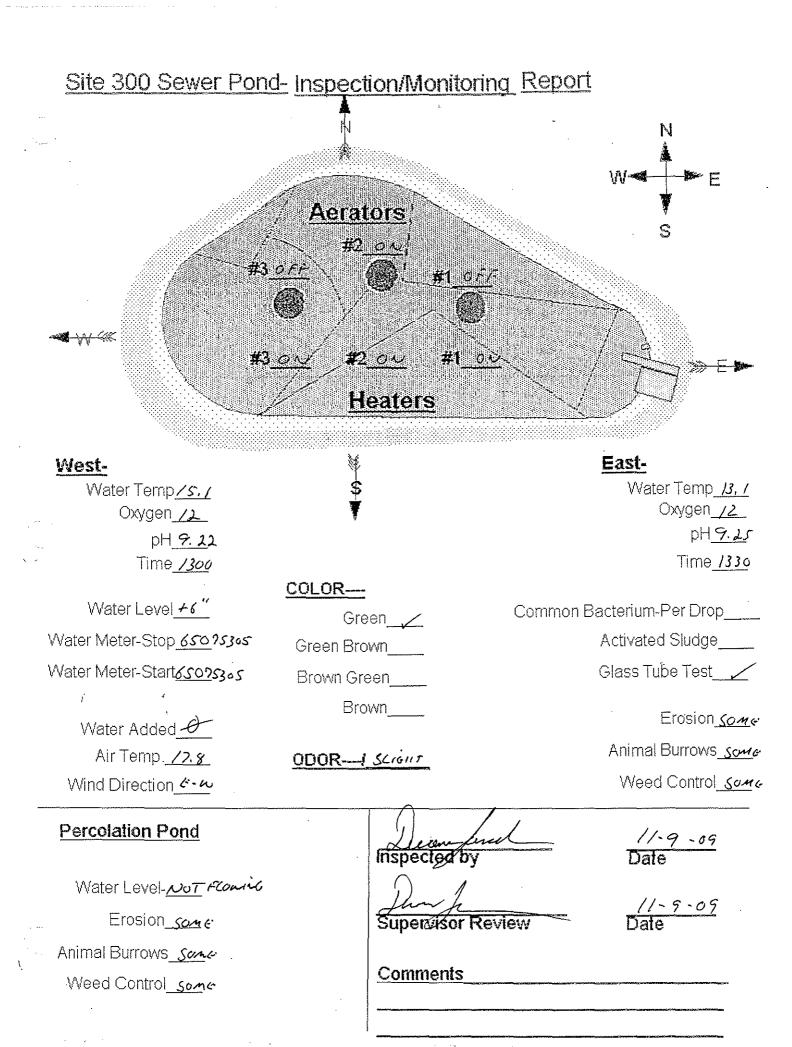
Site 300 Sewer Pon	<u>d- Inspection/Monit</u>	<u>oring</u> <u>Report</u>
	Aerators	W
		on Anna
	<u> Heaters</u>	
West- Water Temp_/1,3 Oxygen_12_ pH_8.71 Time_/2,00	\$	East- Water Temp
Water Level <u>+5</u> 1/2 Water Meter-Stop <u>6507536</u> Water Meter-Start <u>650</u> 75505	Green  Green_Brown  Brown Green	Common Bacterium-Per Drop Activated Sludge Glass Tube Test
Water Added <u>##</u> Air Temp <u>15.6</u> Wind Direction <u>E.W</u>	Brown ODOR-1 Nowe	Erosion <u>Jonn</u> Animal Burrows <u>Jan</u> n Weed Control <u>Jann</u>
Percolation Pond	Inspected	9/1000 1130.09 by Date
Water Level- <u>L</u> Erosion <u>Jew</u> Animal Burrows <u>fam</u>	Superviso	
Weed Control	Comment	

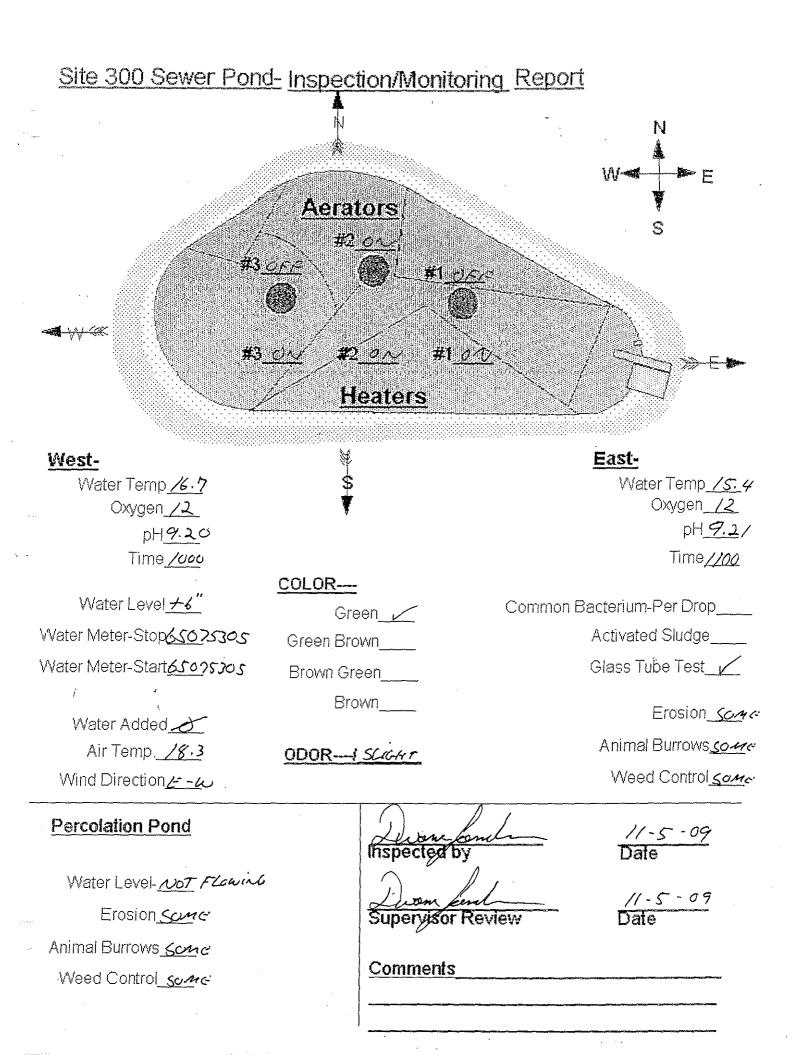


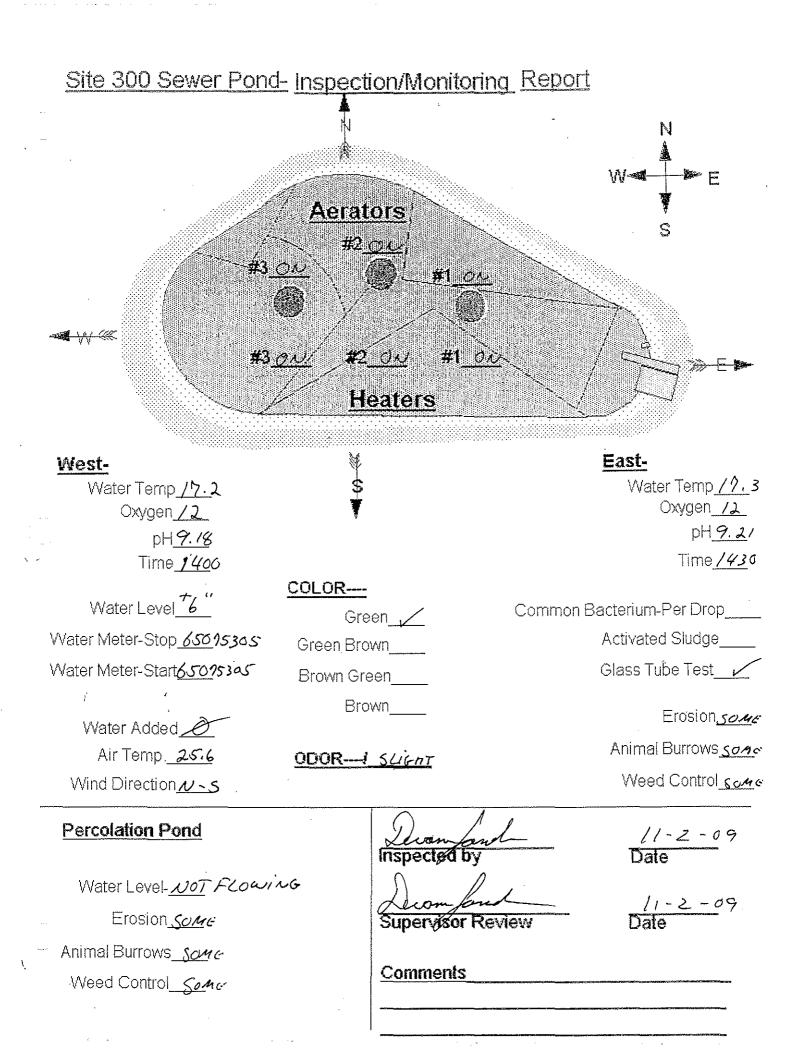


Site 300 Sewer Pond- Inspection/Monitoring Report <u>Aerators</u> #2 。. #1 02 Heaters West-East-Water Temp/3./ Water Temp //.6 Oxygen\_/z\_ Oxygen\_/2\_ pH 9.11 pH 9./2 Time 1030 Time /000 COLOR---Water Level + 52." Common Bacterium-Per Drop Green 🗸 Water Meter-Stop 65025305 Activated Sludge Green Brown Water Meter-Start 65075305 Glass Tube Test Brown Green Brown Erosion Some Water Added 6 Animal Burrows 6000 Air Temp. 14.4 ODOR-1\_SCIGNI Weed Control Sunce Wind Direction Wie Percolation Pond 11-16-09 inspected by Date Water Level- NOT FLOWNO 11-16-09 Erosion Some Supervisor Review Date Animal Burrows Source Comments Weed Control Some









## Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2 oチだ #3 0 6% **#1** 6/5/5 #3 0/4/ #2 ON #1 O1 Heaters East-West-Water Temp / 2.5 Water Temp /3.8 Oxygen\_/2\_ Oxygen\_/\_ pH9.14 pH 9.11 Time /420 Time/345 COLOR----Water Level + 5% Common Bacterium-Per Drop Green V Water Meter-Stop 65025305 Activated Sludge Green Brown Water Meter-Start 5025305 Glass Tube Test 🔑 Brown Green Brown Erosion So44. Water Added \_\_\_\_ Animal Burrows Some Air Temp. 18.9 ODOR-ISCIGMY Weed Control Soma Wind Direction 4. Percolation Pond 10-29-09 inspected by Water Level-NOT Flowing <u>/0 -29 -09</u> Date Erosion SOME Supervisor Review Animal Burrows Some Comments Weed Control Come

Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2 (JN.) #2 OV Heaters East-West-Water Temp 26, 2 Water Temp 20.1 Oxygen\_12 Oxygen\_/2 pH 9.10 pH 9.13 Time /040 Time 10:30 COLOR---Water Level +63/4 Common Bacterium-Per Drop\_ Green √ Water Meter-Stop 65075305 Activated Sludge Green Brown \_\_ \_ Water Meter-Start 650 75 305 Glass Tube Test \ Brown Green Brown Erosion Som Water Added Animal Burrows Air Temp. 22-2 ODOR---/\_ Weed Control Wind Direction N-5 Percolation Pond inspected by Water Level J Mu /0-/5-09 Date Erosion Comy Supervisor Review Animal Burrows Domy Comments Weed Control

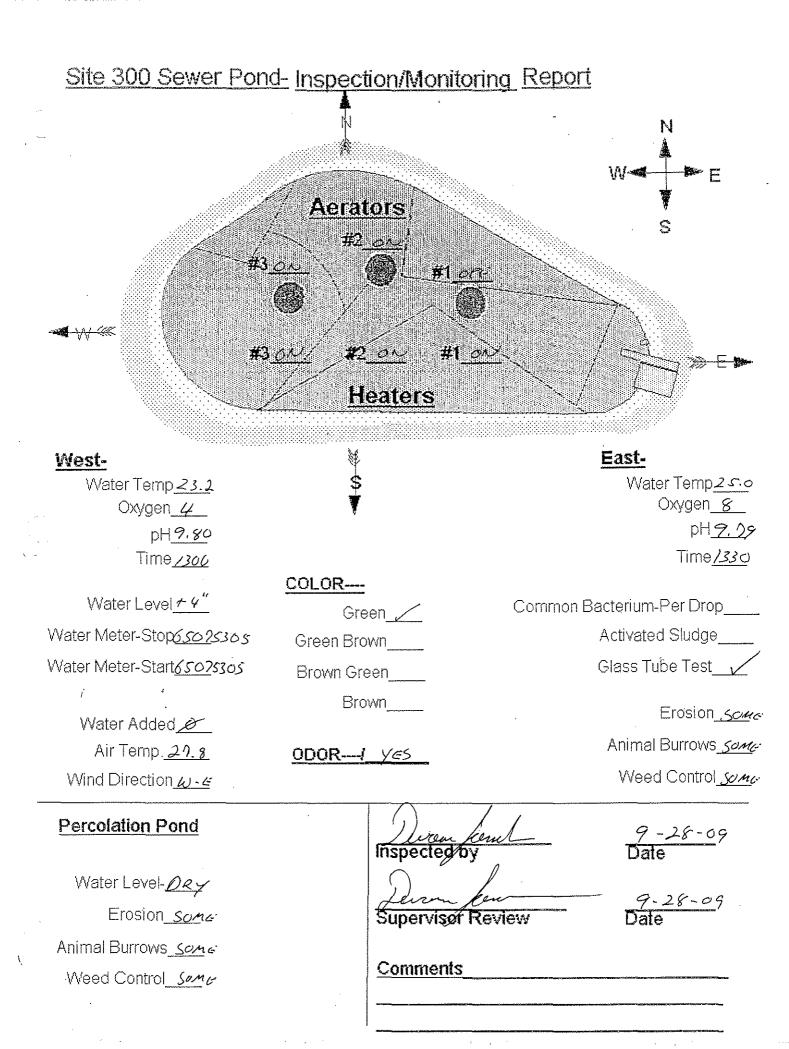
Site 300 Sewer Pond- Inspection/Monitoring Report N Aerators #2 o FC (1999) L #1 101/ #2 /// #1 70. Heaters East-West-Water Temp/8.3 Water Temp / 7. J Oxygen /O Oxygen /2 pH 9.24 pH 9,23 Time/330 Time /300 COLOR---Water Level +43/2" Common Bacterium-Per Drop\_ Green ./ Water Meter-Stop 65075305 Activated Sludge Green Brown Glass Tube Test Water Meter-Start & 6075305 Brown Green Brown Erosion Came Water Added A Animal Burrows Some Air Temp. 12.8 ODOR-I NONE Weed Control SoMc Wind Direction 5-W Percolation Pond 10-12 -09 inspected by Date Water Level- DRY 10-12-09 Erosion Some Animal Burrows Some Comments Weed Control Some

Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2014 剣1っん #2 o~ #3 0~/ **Heaters** East-West-Water Temp 16.2 Water Temp /2.5 Oxygen 8 Oxygen 5 pH 9.62 pH 9.65 Time /430 Time /400 COLOR---Water Level <u>+ # "</u> Common Bacterium-Per Drop Green\_\_\_ Water Meter-Stop 650 75305 .Activated Sludge Green Brown Water Meter-Start 507530.5 Glass Tube Test Brown Green Brown Erosion Some Water Added A Animal Burrows Some Air Temp. 21.1 ODOR-154617 Weed Control Some Wind Direction ムーん **Percolation Pond** 10-5-09 inspected by Water Level-Dey 10-5-09 Erosion Some Supervisor Review Date Animal Burrows Some

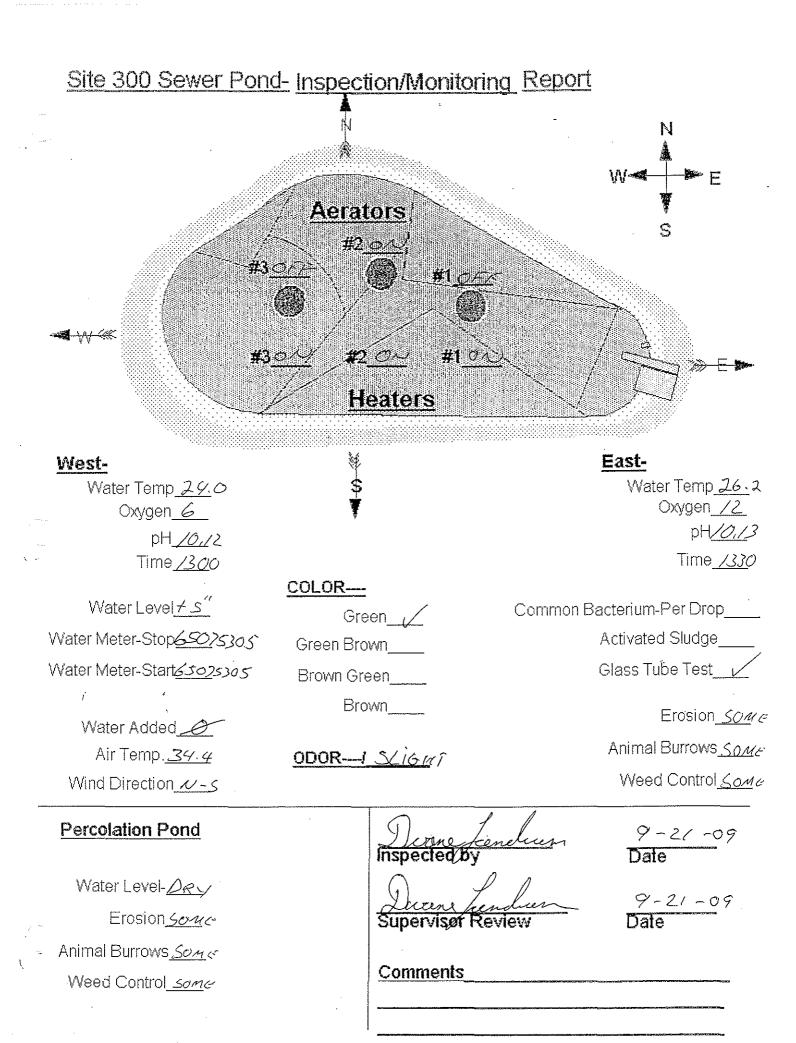
Comments

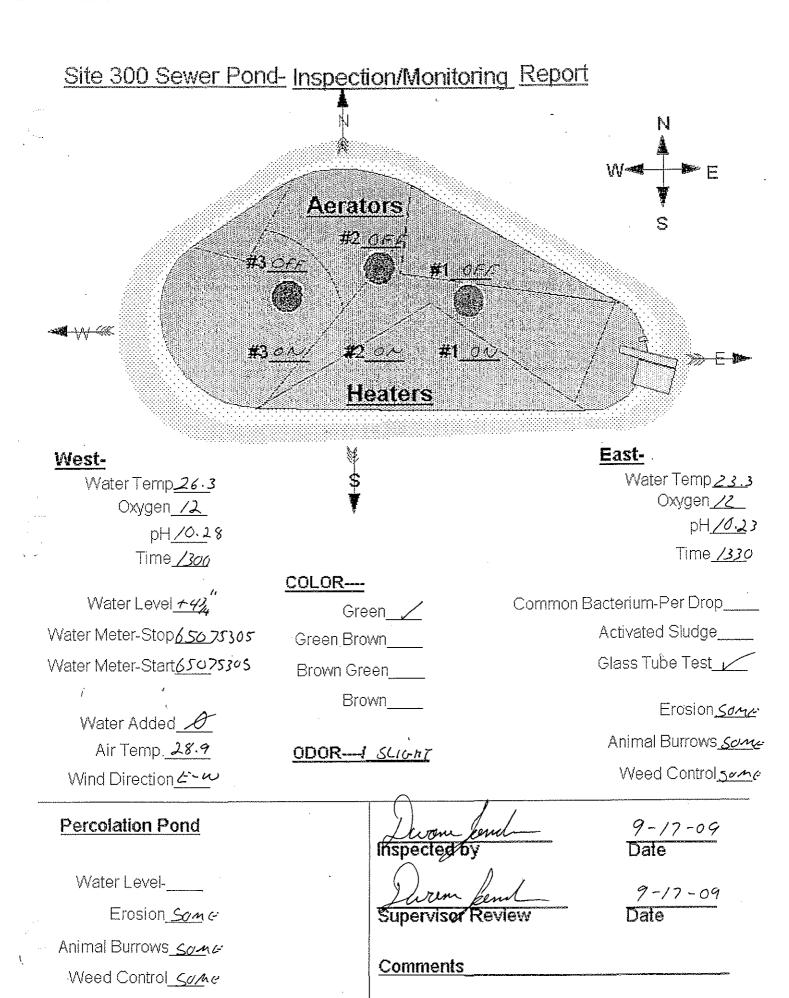
Weed Control Sunc

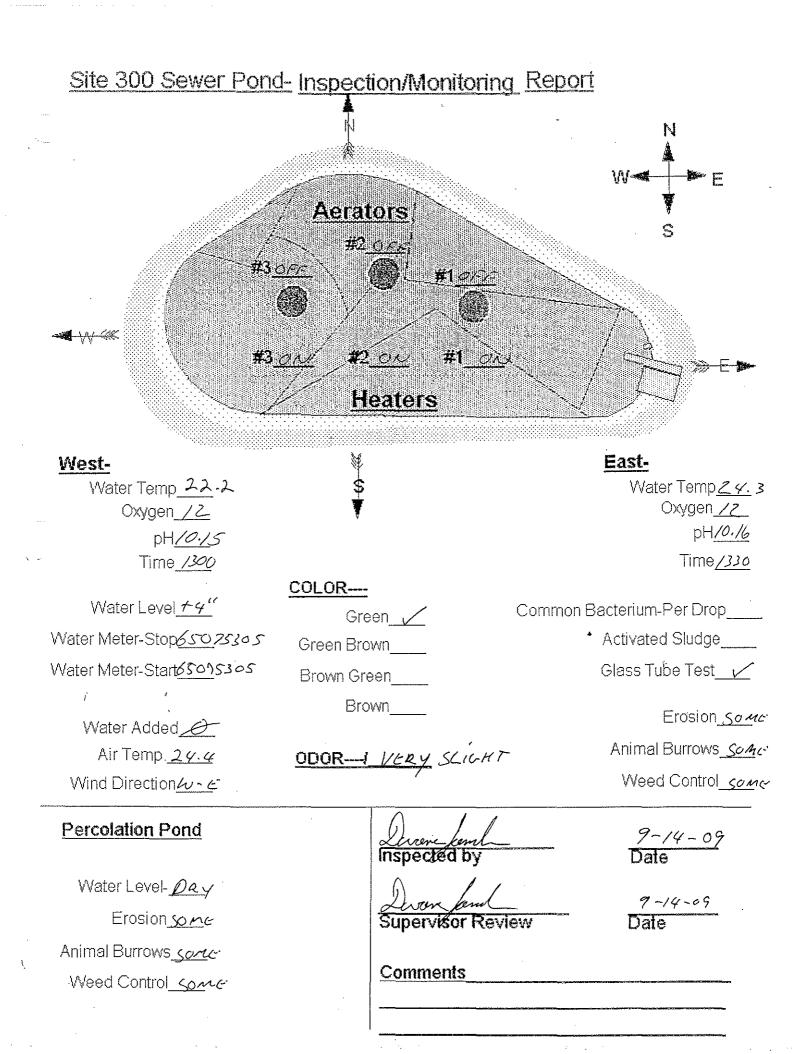
Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2 0 1/2 **#1** 0 (2) #2 o n #1 04 Heaters East-West-Water Temp 18.6 Water Temp/9// Oxygen\_/2 Oxygen /Z pH 9.20 pH9.66 Time /430 Time/400 COLOR---Water Level ナ3/2 Common Bacterium-Per Drop\_\_\_ Green ./ Activated Sludge\_\_\_\_ Water Meter-Stop 65095305 Green Brown Glass Tube Test v Water Meter-Start 65625305 Brown Green Brown Erosion Some Water Added 🔑 Animal Burrows Some Air Temp. 26.1 ODOR-1 SUGHT Weed Control SOME Wind Direction 6-6 **Percolation Pond** 10-1-09 Date Water Level- DRY Erosion Samo Animal Burrows Some Comments Weed Control SOME



Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2 01/2 #301 #102 #2 0~ Heaters East-West-Water Temp 26.7 Water Temp 26.7 Oxygen 6 Oxygen /2 pH 9.94 pH/0.01 Time 1300 Time/330 COLOR-Water Level + 4/6 Common Bacterium-Per Drop Green . Water Meter-Stop 650 95305 Activated Sludge Green Brown Water Meter-Start 65025305 Glass Tube Test 1 Brown Green Brown Erosion Some Water Added Animal Burrows, SOME Air Temp. 36.7 ODOR- SCIGHIT Weed Control SOME Wind Direction としい **Percolation Pond** 9-24-09 inspected by Water Level-DR ✓ 9-24-09 Erosion Some Date Animal Burrows Some Comments Weed Control Some



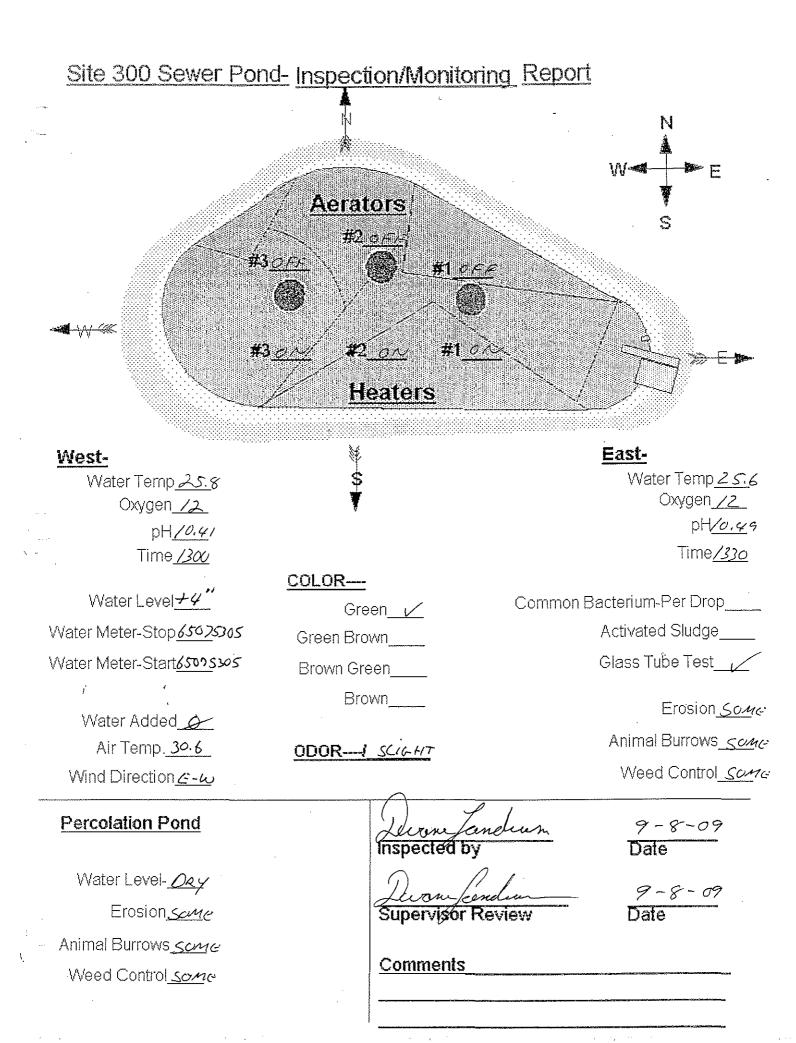


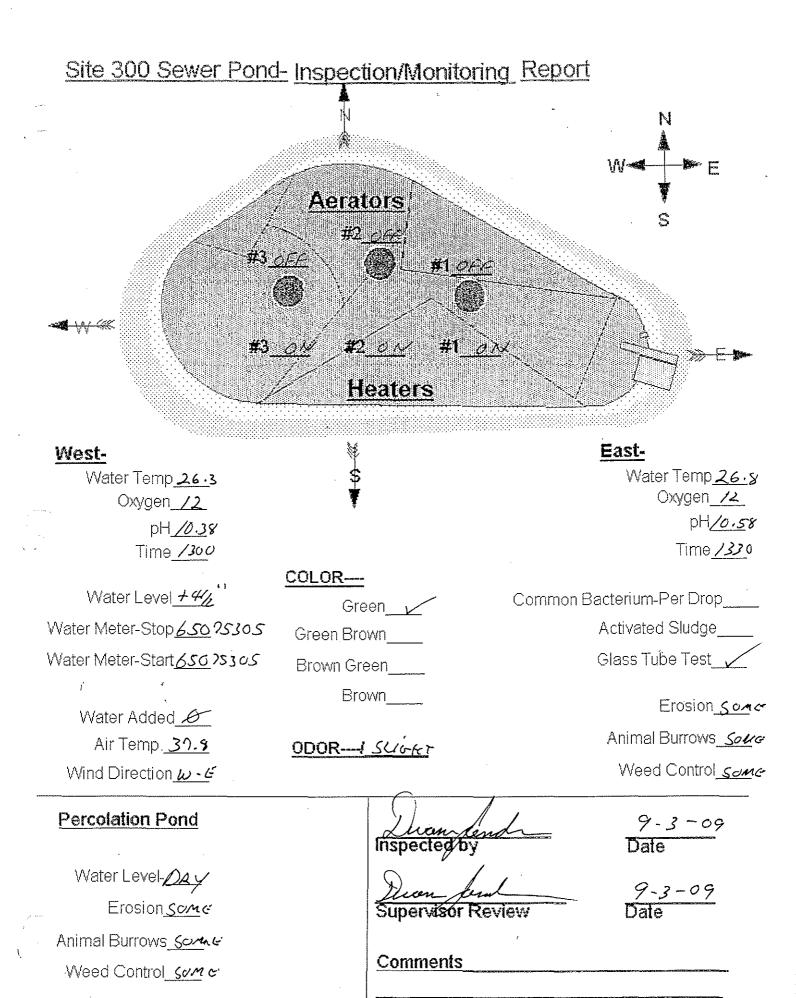


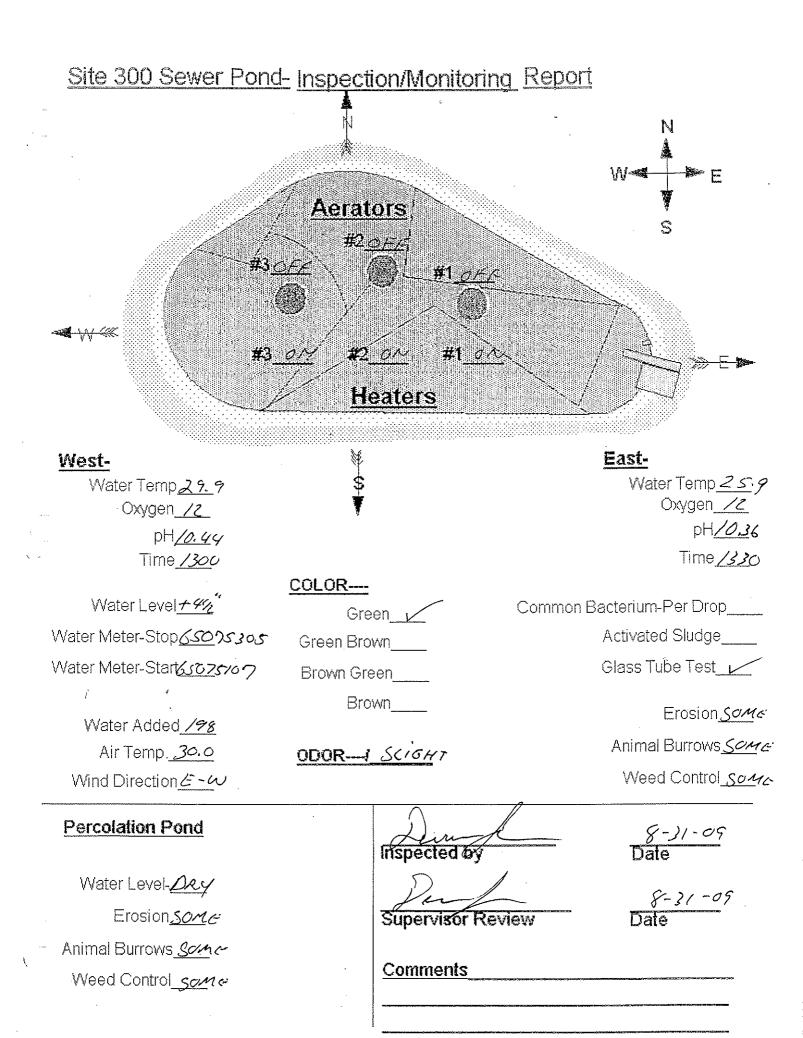
Site 300 Sewer Pond- Inspection/Monitoring Report <u>Aerators</u> #2 or c #3*01*7 #1 or/ #2 ON #3 ON Heaters East-West-Water Temp 23.9 Water Temp 29.3 Oxygen\_\_/2\_ Oxygen\_/2\_ pH/0.98 pH\_//.// Time /330 Time /300 COLOR-Water Level ナ4" Common Bacterium-Per Drop\_\_\_ Green 🗸 Activated Sludge\_\_\_ Water Meter-Stop65075305 Green Brown Glass Tube Test 🗸 Water Meter-Start 6 5025305 Brown Green Brown Erosion Some Water Added A Animal Burrows & MC Air Temp. 35.0 ODOR-1 SCIGHT Weed Control sone Wind Direction ∠- ~ Percolation Pond 9~/0 -09 Date inspected by Water Level-<u>DR</u> 9 -10 -09 Date Erosion Some Supervisor Review Animal Burrows SOME

Comments

Weed Control Sone







Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2\_055 **Heaters** East-West-Water Temp 24.3 Water Temp 26.7 Oxygen /Z Oxygen\_/2 pH/039 pH /0,31 Time /330 Time /300 COLOR----Water Level + 43/4" Common Bacterium-Per Drop\_\_\_\_ Green / Water Meter-Stop 65025/07 Activated Sludge Green Brown Glass Tube Test 🗸 Water Meter-Start 65024301 Brown Green Brown\_\_\_\_ Erosion Some Water Added 50,806 Animal Burrows Some Air Temp. 34.4 ODOR-I NONE Weed Control SOMA-Wind Direction ← ~~ **Percolation Pond** Inspected by Water Level- DRy 8-27-09 Erosion Some

Supervisor Review

Comments

Animal Burrows Some

Weed Control\_sand

Date

Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2 00% #3 OFF #2 0/-Heaters East-West-Water Temp 22.6 Water Temp 28.2 Oxygen\_/2 Oxygen /2 pH/0.22 pH/0.32 Time /330 Time /300 COLOR---Water Level + 45 Common Bacterium-Per Drop Green 🗸 Activated Sludge Water Meter-Stop 65624301 Green Brown Glass Tube Test 🗸 Water Meter-Start 6495 4408 Brown Green Brown Erosion Some Water Added 69, 893 Animal Burrows Source Air Temp. 27.8 ODOR-1 SLIGHT Weed Control Some Wind Direction & -w **Percolation Pond** inspected by 8-24-09

Water Level-Day

Erosion Some

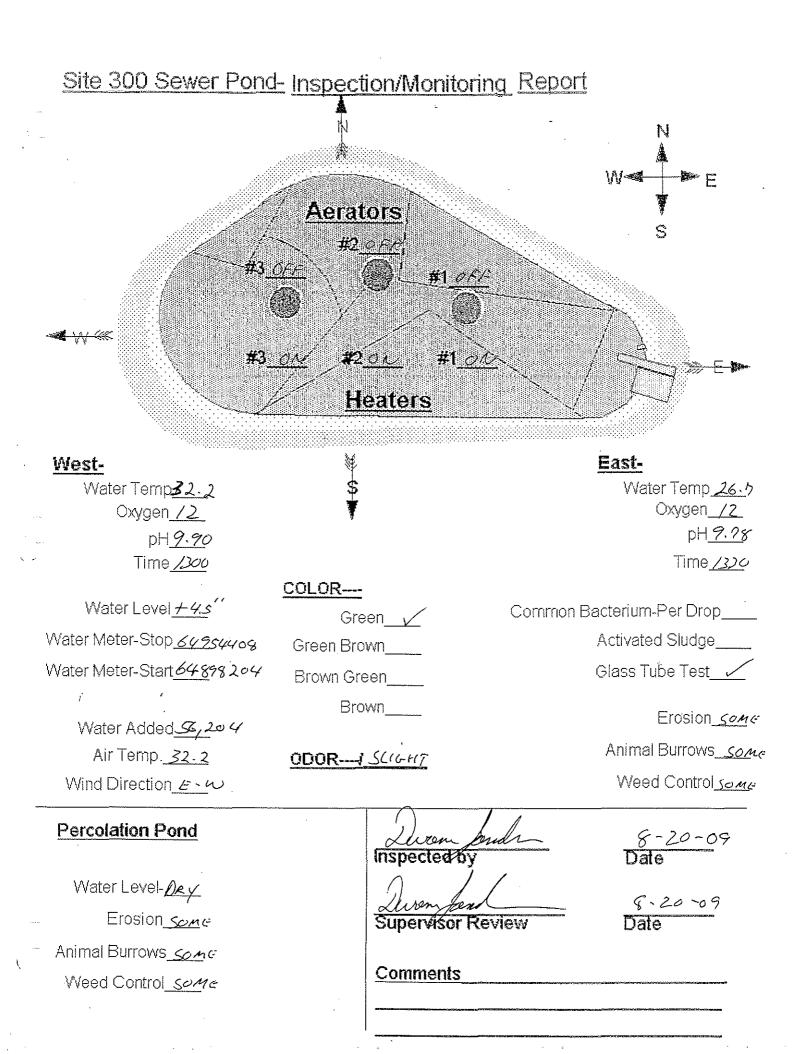
Animal Burrows Some

Weed Control Some

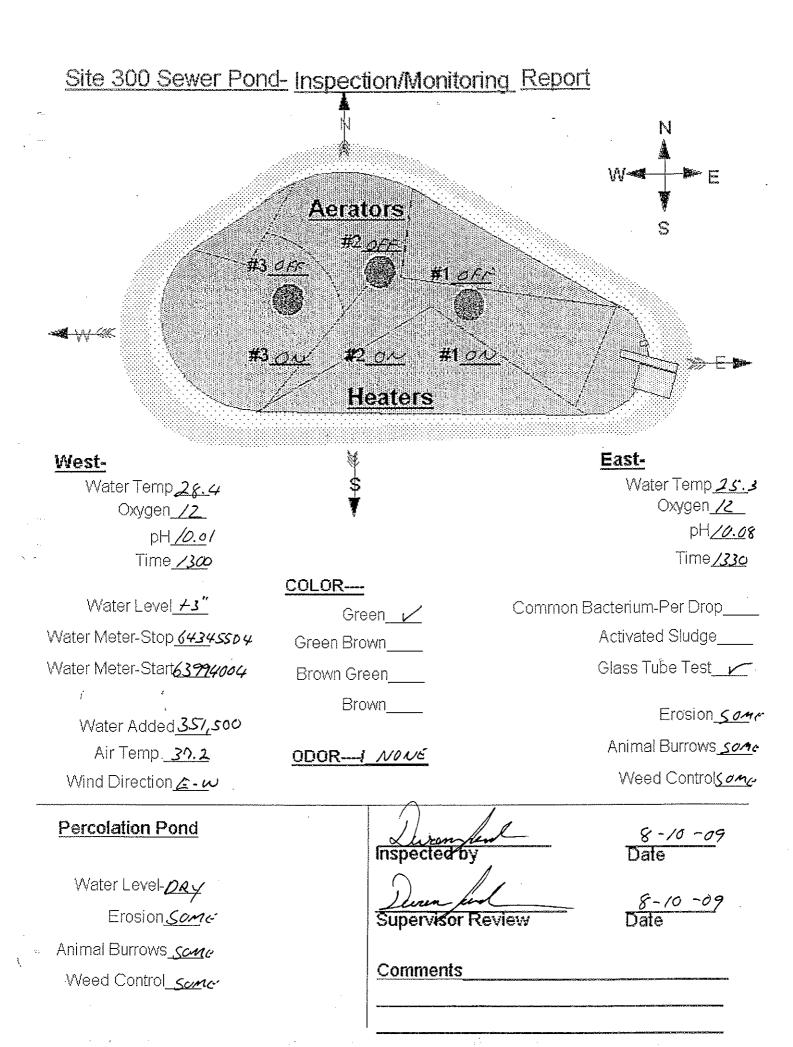
Luan fundaments
Supervisor Review

%-24-09 Date

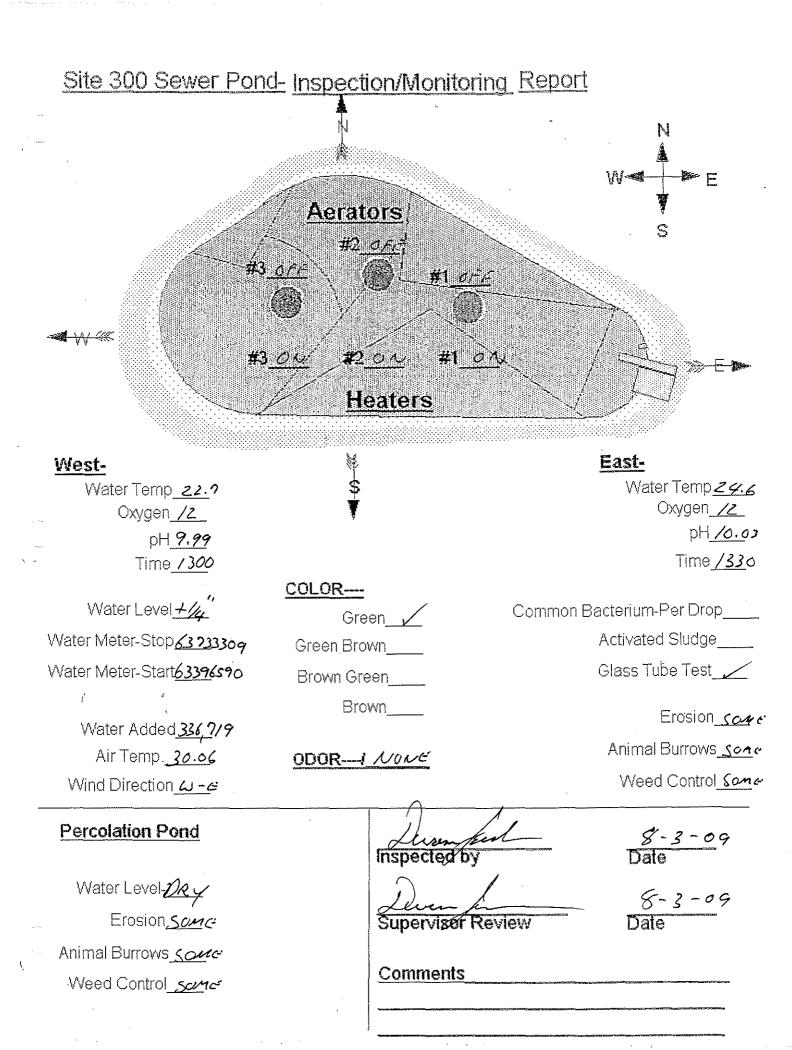
Comments DONO APPEARS TOBE
IN GOOD CONDITION.



Site 300 Sewer Pond- Inspection/Monitoring Report **Aerators** #2 off #3 c F F **#1** 0,57 #1 Ø/V #2 or Heaters East-West-Water Temp 24.2 Water Temp 27.2 Oxygen\_/2\_ Oxygen /2 pH9.68 pH9. 24 Time/330 Time 1300 COLOR----Water Levelナ45" Common Bacterium-Per Drop Green / Activated Sludge Water Meter-Stop (4898204 Green Brown Glass Tube Test // Water Meter-Start 64345504 Brown Green Brown Erosion Conc Water Added SS2,700 Animal Burrows Some Air Temp. 33.3 ODOR-1 SLIGHT Weed Control Sume Wind Direction E-W Percolation Pond Inspected by Water Level- **DRY** 8-/2-09 Date Erosion Some Animal Burrows scale Comments Weed Control Some



Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2 046 #3 000 L #1 EAX #3 0/~ #2 or #1 61 Heaters West-East-Water Temp 24. 4 Water Temp 22.2 Oxygen /2 Oxygen\_/z\_ pH/0.01 pH 9.98 Time/330 Time /300 COLOR-Water Level ≁/" Common Bacterium-Per Drop Green\_\_\_ Water Meter-Stop 6399464 Activated Sludge Green Brown\_\_\_\_ Glass Tube Test 🗸 Water Meter-Start 63733369 Brown Green Brown\_\_ Erosion Come. Water Added <u>∠60,695</u> Animal Burrows Come Air Temp. 24.4 ODOR-1 NONE Weed Control Some Wind Direction 6-6 Percolation Pond Water Level-*DRY* 8-6-09 Date Erosion Some Animal Burrows Some Comments Weed Control Some



Site 300 Sewer Pon	d- Inspection	/Monitoring Report
**************************************	Aerators  Aerators	
**	ラ) ジグ) <del>Heat</del>	
West-	Ĭ	East-
Water Temp <u>27.</u> 4 Oxygen <u>/2</u>	7	Water Temp <u>2/e-2</u> Oxygen <u>/2</u>
pH <u>/0.27</u>	ý	pH_10.08
Time <u>/2/2/</u> )		Time 1920
	COLOR-	
Water Level <u>-/"</u>	Green_	✓ Common Bacterium-Per Drop
Water Meter-Stop (1339 659)	Green Brown_	
Water Meter-Start (3)(300)	Brown Green_	Glass Tube Test
i	Brown_	Erosion <u>Son</u>
Water Added <u>30</u> ,259		Animal Burrows form
Air Temp. <u>31.1</u>	ODOR-1 /	5000
Wind Direction W-E		Weed Control
Percolation Pond	ins	Av- Thurs 7-30-09 pected by Date
Water Level In V	Ì	•
Erosion	্ । জ্	pervisor Review Date
Animal Burrows Junu	*** 	
Weed Control Zone	<u>C</u> c	omments

1 /

Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2 000 #1 066 #3 014 #2 on #1 ox Heaters East-West-Water Temp 25-8 Water Temp 29.2 Oxygen /2 Oxygen\_/z\_ pH/0.04 pH 10.10 Time /330 Time 1300 COLOR----Water Level -/" Common Bacterium-Per Drop Green 1/ Water Meter-Stop 63/6300/ Activated Sludge Green Brown\_\_\_ Water Meter-Start 62823 802 Glass Tube Test 1/ Brown Green Brown Erosion Soud Water Added 335/99 Animal Burrows Sour Air Temp. 32.8 ODOR-I NONE Weed Control Source Wind Direction v-s **Percolation Pond** Inspected by Water Level-DRY Erosion Some Supervisor Review Animal Burrows some Comments Weed Control Sanc

Site 300 Sewer Pond-Inspection/Monitoring Report N Aerators #2 0 ... #3 🛷 #2 o 🗘 #1 J 🗘 Heaters East-West-Water Temp 26.2 Water Temp 3/./ Oxygen\_/2 Oxygen /2 pH 9,99 pH\_10.09 Time /300 Time 1330 COLOR----Water Level -/" Common Bacterium-Per Drop\_\_\_\_ Green 🗸 Water Meter-Stop <u>62</u> 823 802 Activated Sludge\_\_\_\_ Green Brown Water Meter-Start 62.56880.5 Glass Tube Test Brown Green Brown Erosion some Water Added 254, 991 Animal Burrows Some Air Temp. 34.7 ODOR-1 SLIGHT Weed Control Some Wind Direction とい **Percolation Pond** Inspected by Water Level- DRY Erosion Some Date Animal Burrows Some Comments Weed Control come

Site 300 Sewer Pond- Inspection/Monitoring Report N Aerators #2 0 2 /2 #3 OFF #1 0/2 #3 0/9 #2 0/V #1 った Heaters East-West-Water Temp 26.2 Water Temp 22.4 Oxygen /2 Oxygen /2 pH 9.90 pH 9.89 Time/330 Time /300 COLOR---Water Level -/% Common Bacterium-Per Drop\_\_\_\_ Green 6 Water Meter-Stop 62568805 Activated Sludge Green Brown Glass Tube Test 🗸 Water Meter-Start 62478702 Brown Green Brown Erosion Some Water Added 90,103 Animal Burrows Some Air Temp. 39.2 ODOR-1\_NONG Weed Control Sono Wind Direction ん - ぐ **Percolation Pond** 7-20-09 inspected by Water Level- DRY · Erosion Some Supervisør Review Animal Burrows Some Comments Weed Control same

# Site 300 Sewer Pond- Inspection/Monitoring Report Ν Aeraiors #2 👊 #1 -) = = #2 0/1/ Heaters East-West-<u>د. دد</u> Water Temp Water Temp28.3 Oxygen\_/2\_ Oxygen /2 pH9.85 pH/0,10 Time/4/30 Time /400 COLOR----· Water Level -/2 Common Bacterium-Per Drop\_\_ Green\_\_\_ Water Meter-Stop 62 478201 Activated Sludge Green Brown Water Meter-Start 2408607 Glass Tube Test , Brown Green Brown Erosion some Water Added 70,095 Animal Burrows Some Air Temp. 32. 8 ODOR-1 NONE Weed Control Suma Wind Direction 4-6 **Percolation Pond** 1-16-09 inspected by Water Level-De Y 7-16-09 Erosion some Supervisor Review Animal Burrows Some Comments Weed Control Some

Site 300 Sewer Pond- Inspection/Monitoring Report N Aerators #2 00 \_ #1*06/* #3 014 #2 0 AJ #1 070 Heaters East-West-Water Temp 25,2 Water Temp 23.8 Oxygen /2 Oxygen\_/2 pH9-87 pH 9.84 Time/33 Time 1300 COLOR---Water Level O Common Bacterium-Per Drop\_ Green 🗸 Water Meter-Stop <u>62 40 % ๑ ำ</u> Activated Sludge Green Brown Water Meter-Start623/8606 Glass Tube Test Brown Green Brown\_ Erosion SOME Water Added 90,001 Animal Burrows Some Air Temp. 32-2 ODOR - 1 NONE Weed Control Sone Wind Direction N-S **Percolation Pond** \$-13-09 inspected by Water Level-DAY 7-13-09 Erosion SCME Supervisor Review Date Animal Burrows Some Comments Weed Control\_sance

Site 300 Sewer Pond- Inspection/Monitoring Report Ν Aerators #2 0~~ #2 o~ #1 🕬 Heaters West-East-Water Temp 26.6 Water Temp 24.3 Oxygen\_/2 Oxygen /2 pH9.84 pH 9.81 Time / 3 30 Time /300 COLOR---Water Level ≠ ½ Common Bacterium-Per Drop\_\_\_ Green / Water Meter-Stop 623/8606 Activated Sludge Green Brown Water Meter-Start 62249422 Glass Tube Test\_\_\_\_ Brown Green Brown Erosion Some Water Added 31,184 Animal Burrows Scme. Air Temp. 28.9 ODOR-1 None Weed Control Some Wind Direction 6-6-**Percolation Pond** inspected by

Water Level- DRY
Erosion_Some
Animal Burrows Som &

Weed Control Some

Inspected by Date

Date

7-9-09

Date

7-9-09

Date

Comments

Site 300 Sewer Pond- Inspection/Monitoring Report Aerators #2 o/u/ #1 0/7 #3 /7/2 #1 777 Heaters West-East-Water Temp 22.3 Water Temp24.2 Oxygen 12 Oxygen /2 pH 9,89 pH 9.93 Time /300 Time <u>/ 33</u>0 COLOR---Common Bacterium-Per Drop Green ... Water Meter-Stop 622 47422 Activated Sludge Green Brown Glass Tube Test Water Meter-Start6/7/5330 Brown Green Brown Erosion Some Water Added 532,077 Animal Burrows Source Air Temp. 20.8 ODOR-1 NONG Weed Control\_Somr Wind Direction ω~と **Percolation Pond** Water Level-DRY Erosion SOME Supervisor Review Animal Burrows Same Comments Weed Control same

Site 300 Sewer Pond-Inspection/Monitoring Report Aerators #2 Ħĺ Heaters East-West-Water Temp, 29.2 Water Temp 25.7 Oxygen\_12\_ Oxygen (Z pH\_10.24 pH\_10.0% Time\_100\_ Time 10(2 COLOR-Common Bacterium-Per Drop Green • Water Meter-Stop 61715330 Activated Sludge Green Brown Water Meter-Start 61354506 Glass Tube Test 🗸 Brown Green Brown\_\_ Erosion Jory Water Added 350,824 Animal Burrows Air Temp. 37.8 ODOR---Weed Control Zom Wind Direction E-W **Percolation Pond** nnow inspected by Water Level-Erosion bow Supervisor Review Date Animal Burrows bom Comments Weed Control for

Site 300 Sewer Pond-Inspection/Monitoring Report **Aerators** <u>Heaters</u> East-Westoff Water Temp\_25.4 Water Temp 292 Oxygen\_/O Oxygen 1D pH\_10.68 pH 10-lel Time\_1400 Time\_/400 COLOR----Water Level 51/4 Common Bacterium-Per Drop\_\_\_\_\_ Green V Water Meter-Stop\_523436 Activated Sludge\_\_\_ Green Brown Water Meter-Start 5205546 Glass Tube Test Brown Green Brown Water Added 28.864 Erosion 50Mg Animal Burrows Lund ODOR----/ NONC Air Temp. 37.9 Weed Control Some Wind Direction & tow Inspected by Percolation Pond Water Level- Not flow ing 7-/4-08 Date Erosion Some Animal Burrows Now Comments Weed Control Some.

Site 300 Sewer Pond	I-Inspection/Monitor	ing Report
	Aerators	W → E S
#3 <u>s</u>	#2 #1 #2 #2 #42 #43 #43 #44 #45	»E►
West- Water Temp 27.4 Oxygen 12 pH_10.07 Time_1400		East- Water Temp <u>25.2</u> Oxygen 12 pH_1012 Time_1400
Water Level <u>-5</u> /4 Water Meter-Stop <u>52</u> 05546 Water Meter-Start <u>5</u> /95991	Green  Green Brown  Brown Green	Common Bacterium-Per Drop  Activated Sludge  Glass Tube Test
Water Added 9555 Air Temp. 34.4 Wind Direction E to W	ODOR/ None	Erosion <u>Some</u> Animal Burrows <u>Some</u> Weed Control <u>Some</u>
Percolation Pond  Water Level-Not Flowing  Erosion Game	Inspected by Supervisor Ri	$ \begin{array}{ccc} 7 & 7 & -08. \\ \hline Date \\ \hline Date \\ \hline Price & Date \\ \hline $
Animal Burrows <u>uch</u> Weed Control <u>Som</u> u	Comments	

Tarç	jet :	Sample Date:	10-Aug-2	009		Month:	Norm Qtr: 3	Norm Year	: 2009/ 106/	
WELL ID	;		W-7DS			AREA INFO:		S300/GSA/EG		
DATE:		10-Aug-20	09	LOG BOOK	(DOCUME	NT CONTROL)	#:	AA17143		
PURGE M	ЕТНО	DD/SAMPLE MET	'HOD :	GP / 3VE	:6	CONTAMINAN	r present:		OK.	
SCREENE	D IN	TERVAL;	18.80 -	28.80		PUMP INTAKE	DEPTH:		27.80	
DEPTH O	F CA	SING:	30.3	0		CASING DIAM	TETER:	4	.50	
DEPTH T	o wa	TER:	15.	32		VOLUME FACT	OR:	0.8	326	
WATER I	N CA	SING (ft):	14.	98		CASING VOL	(Gal/Time):	12.4 x3	cu= 37-2	
TIME PU	MP C	ON:	081	6		INITIAL FLO	W RATE (Q=G	PM):	2.6	
TIME PU	MP O	FF:	04	40	1	MEASURED BY	FLOW METER	GRAD CYL.	BUCKET/ OTHER	
TIME	Q	GAL PURGED	VOLUMES	На	TEMP C	sc	mV	OG	DTW	
0821		12.4	\	7.33	٦.٢	16.72	11		15.41	
0826		24.8	2	7.36	21.3	1676	22	1	15.48	
0832		37.2	3	7.34	21.4	1628	29	1	15.48	
0834					•					
6836										
METER pH : SC ; mV :		SERIAL (0709	5114	LIBRATED YES NO YES NO YES NO YES NO	3	PROJECT:	PLOYER:	3MRP		
QC SAMPI	Æ II	D:		QC LAB(S)		<u> </u>	QC SAME	PLE TIME:	Marrow .	
SAMPLE I	D (	verify): <u> </u>	· 7 as	3085	n	TIME COLLEC	PED:	0840		
PF	3M 3M	IRP IRP	BCLABS-BA	K K	S3ANI S3MET	ONS PALS	QUANTITY 1 1	250m] 500m]	OF CONTAINERS  Polyethylene Polyethylene	
	3 M		BCLABS-BA	ıK	SSWET		0 2	500m3	l Polyethylene L Polyethylene	
	717	11/1	<del>- FGLSTK</del>		<del>- 6M9 2 2 1</del>	TOTAL		<del></del>	rilised Polyethylene	مسي

NO Sample für Smazzi: 540.
Added 2.5 oz at CL

Revision: 01/30/2009

Ta	rget	Sample Date	: 11-Aug-	2009		Month:	Norm Qtr:	3 Norm Y	ear: 2009 W
WELL I	D:		W-7DS			_AREA INFO:		\$300/GS#	/EGSA
DATE:_		11-Aug-2	009	_LOG BOOK	(DOCUM	ENT CONTROL	·) #:	አል171	434
PURGE	метн	OD/SAMPLE ME	THOD:	GF / 31	TES	CONTAMINA	NT PRESENT		ND
SCREEN	ED I	NTERVAL:	18.80	- 28.80		PUMP INTAK	E DEPTH:		27.80
DEPTH (	OF C	ASING;	30.	30	···	CASING DIA	METER:		4.50
EPTH (	ro w	ATER:	15	.33		VOLUME FAC	TOR:		0.826
ATER :	IN CA	ASING (ft):	14.	97	·	CASING VOL	(Gal/Time	): 17.4 A	3cu= 37.2
'IME PU	MP C	ON:	103	31	···	INITIAL FLO	OW RATE (Q:	≕GPM):	2.5 a
IME PU	MP C	PFF:	100	53		MEASURED BY	:FLOW MET	GRAD CY	L./ BUCKET/ OTHE
TIME	10	GAL PURGED	VOLUMES	На		sc		0G	DTW
036	-	12.4		7.63	21.6	1677	7	1	15,40
1041	ļ	24.8	2	7.56	21.9	1626	2	(	15,40
1045	-	37.2	3	7.49	21.6	1627	28	(	15.41
047				7.46	71.5	1629	32		
049		·		7.43	21.4	1627	34		
05[				7.44	21.4	1630	3(		
									·
TER		SERIAL #	CA:	LIERATED KES/NO	S	AMPLER /EMI	PLOYER:		
o:				YES/NO YES/NO YES/NO			ERVATION/AI	3MRI MT of REAGE	NT: WA
SAMPL	E ID	:	‹	Q LAB(S):			QC SAN	IPLE TIME:	<del></del>
MPLE I	D (V	ERIFY):	)-70s/	13085	т	IME COLLECT	ED:	1053	
	OJEC'	T / ANX	ALYTICAL	LAB /REQ	UESTED A	ANALYSIS/	QUANTII	Y /TYP	E OF CONTAINERS
		1	CLABS-BA CLABS-BA	K	53ANI(	NS NLS	<del></del>	250	ml Polyethylene
	-3MR	P	CLABS-BA	K 89	METALS:	FILTER		500	ml Polyethylene ml Polyethylene
	3MR		CLABS~BA		S3WETC				ml Polyethylene

only Sampled smazzlisho

Revision: 01/30/2009

		mple Date:							rear: 2009 W
WELL I	D:	·····	W-7D8		·	AREA INFO:		8300/GSI	A/EGSA
							) #:		\ \
PURGE 1	METHOD	Sample med	HOD:	GP / 3V	BS	CONTAMINAN	T PRESENT:		ND
SCREENE	ED INTE	RVAL:	18.80	~ 28.80		PUMP INTAK	E DEPTH:		27.80
									4.50
									0.826
WATER I	N CASI	NG (ft):	3.	77		CASING VOL	(Gal/Time)	<u>4 12.11 :</u>	300 = 34,2 Cal
rime pu	MP ON:		७५४२	<u>.</u>	·····	INITIAL FLO	OW RATE (Q=	GPM):Z	.5 Q
CIME PU	MP OFF	11				MEASURED BY	LOW METE	R/ GRAD CY	L./ BUCKET/ OTHER
TIME	QG	AL PURGED	VOLUMES	На	TEMP C	sc	mV	OG	DTW
2936	<del>                                     </del>	11.4	(	7.35	12.0	1452	232	ţ	16.58
<u> </u>		22.8	ι	7.35	22.3	1631	233		16.58
9946		34.2	3	1.31	22.6	1640	267	l	16.59
अपक				7-72	22.4	633	201		
0950				7-31	22.7	1638	212		
ETER H:		serial # 6707454	CAI	YES/NO	P	ROJECT:	PLOYER:	3 KH	IG .
7				YES/NO YES/NO	S	AMPLE PRESI	ervation/am	T of REAG	ENT: NA
						*******	QC SAM	PLE TIME:	
							PED:		
	OJECT	/ AN	ALYTICAL	LAB /REQ		ANALYSIS/			PE OF CONTAINERS
	3EMG 3EMG	1	BCLABS-BA	ĸ	E120	.1	1	250	mL Polyethylene
	3EMG		3CLABS-BA 3CLABS-BA		E150 E300.0		1		mL Polyethylene
	3EMG		<del>- POLOTK</del>		SM9221		1	250	mL Polyethylene terilized Polyethy

Added 2.5 or of cl to well.

Revision: 01/30/2009

Targe	et Sample Date:	10-Aug-2	1009		Month:	Norm Qtr: 3	3 Norm Ye	ear: 2009 (W)(W)
WELL ID:		W-758			AREA INFO:		S300/GSA	/cgsx
DATE:	10-Aug-2	009	LOG BOOK	(DOCUME	ENT CONTROL	) #:	AA1714	.3
PURGE ME	THOD/SAMPLE MET	THOD:	GF / 3V	ES	CONTAMINAN	T PRESENT:_		NO3-11
								26.30
DEPTH OF	CASTNG:	30.	10	·	CASING DIA	METER:		4.50
DEPTH TO	WATER:	16.	66		VOLUME FACT	ror:		0.826
WATER IN	CASING (ft):	13.	44		CASING VOL	(Gal/Time):	. H.( x	Sev = 33.3
	ON:							
	OFF:							L./ BUCKET/ OTHER
TIME	Q GAL PURGED	VOLUMES	На	TEMP C	sc	mV_	OG	DTW
1034	11.1	1	7.37	23.8	1660	`37		16.79
1040	22.2	٤	7.36	25.5	1658	-33	1	1680
1045	33.3	3	7.37	23.6	1679	-15	(	16.83
1047			7.34	23.2	1671	-18		
1049			7.30	23,1	1670	- 195		
SC :	SERIAL + 6 TOS	Υ	LIBRATED VES/NO VES/NO VES/NO VES/NO	P	ROJECT:	PLOYER:	3MRI	
QC SAMPLE	ID:		C LAB(S):	-		QC SAMI	PLE TIME:	
SAMPLE ID	(VERIFY):	J-7ES/	3UE.S	т	IME COLLECT	TED:	105	7
PROJ	ECT / AN. BMRP	•	lab /rec K K	UESTED A S3ANIO S3META	ANALYSIS/ ONS ALS	QUANTITY 1 1	7 /TYP 250: 500:	E OF CONTAINERS ml Polyethylene ml Polyethylene
3	BMRP 1	BCLABS-BA	K	S3WETC		0 2		ml Polyethylene ml Polyethylene
3	MRP	FGL/STK	······	-3M9221	SHO	1		erilized Polyethyler

NO Sample Rr SM9771:5HO

Added 2.0 or of CL

Revision: 01/30/2009

Tar	get Sample Date	e: <b>11-Aug-</b> :	2009		Month:	Norm Qtr: :	3 Norm Y	Year: 2009 WW
WELL IN	):	W-7ZS			AREA INFO:		S300/GSA	VCGSA (DO
	11-Aug-							
								NO3-11
SCREENE	D INTERVAL:	18.30	~ 28.30		PUMP INTAK	E DEPTH:		26.30
DEPTH O	F CASING:	30.	10		CASING DIA	METER;		4.50
DEPTH T	O WATER:	16.	69	1	VOLUME FAC	TOR:		0.826
WATER I	N CASING (ft):	13	,41	{	CASING VOL	(Gal/Time):	11.0	23=33G1
TIME PU	MP ON:	1130		-	INITIAL RIA	יין אייניייייייייייייייייייייייייייייייי		1.0
TIME PUN	MP OFF:	115	>	1	EASURED (	:FLOW METER	/ GRAD CY	L./ BUCKET/ OTHER
TIME	Q GAL PURGE	VOLUMES	Нq		sc			DTW
1136	1	1	7.48	23.3	1661	-64	(	16.81
1141	22	2	7.41	73.5	1660	-46	1	16.83
1147	33	3	7.47	23,9	1662	-25	(	16.83
1149			7,44	23.7	1660	-18	ł	
1151		-	7,44	23,5	1601	-9		
						_		
METER  OH: SC: NV:		# CAI	IBATED FEX/NO WES/NO WES/NO	PI	ROJECT:		3MRI	
C SAMPLE	ID: W	c	C LAB(S):			QC SAMP	LE TIME:_	
SAMPLE ID	(VERIFY):	J-785	302S	TI	ME COLLECT	ED:		3
PRO	JECT / AI		AB /REQ	UESTED A	NALYSIS/	QUANTITY	/TYP	E OF CONTAINERS
		DCLABS BAI	(	- SOMETA	<del></del>		500	ml Polyothylone
	~	DCLLADG - DALI BCLLADG - DALIDG		<del>METALS: I</del> - <del>OSWETCH</del>	ILTER		<del></del>	ml Polyothyleno
	3MRP	FGLSTK	•	SM9221:		~	250 mL St	<del>ml Polyethylone</del> erilized Polyethyle

Evacuated all CL Sampled for SM9221: SHO ONLY

Revision: 01/30/2009

Та	rget	Sample Date:	: 09-Nov-	2009		Month:	Norm Qtr:	4 Norm Y	ear: 2009 W	<b>`M</b> \\
WELL I	D:		M-7ES	··		AREA INFO	I	\$300/gs#	VCGSA (	
DATE:_	<del></del>	09-Nov-2	009	_LOG BOOM						=
PURGE	метн	OD/SAMPLE ME	THOD:	GP / 31	/ES	CONTAMINA	NT PRESENT:		NO3-11	_
SCREEN	ED I	NTERVAL:	18.30	- 28.30		PUMP INTAK	E DEPTH:		26.30	_
DEPTH	OF C	ASING:	30.	10		CASING DIA	METER:		4.50	-
		ATER:		_					0.826	-
WATER :	IN C	ASING (ft):		1.9		CASING VOL	(Ga)/Time)	. 9.8 >	-3~= 30.0	-
TIME PU	JMP (	ON:	1148			INITIAL RI	OW DAME (O	· 1.0 -	7.5°	_ نام
TIME PU	JMP (	OFF:	1206			MEYGIDAN PA	V. ET OU U	GPM):	L./ BUCKET/ OTHER	•
TIME	Q	GAL PURGED	VOLUMES	7.D					L./ BUCKET/ OTHER	Ł
1152		10	1	7.28	1	sc 1675		<u>og</u>	DTW	]
145		20	2	7.33	}	1674	-22 -25		18,41	•
115%		3ა	3	7.27	}				18,43	-
1206					i	1631	<del></del>		18,44	
1202				7.28	23.4		-41			
1000				7.26	23.3	1628	- 39			
				·		-				
		<u></u>								
METER PH: SC:		SERIAL # G7024	5°4	LIBRATED Y'S/NO	P.	ROJECT:	PLOYER:	3 <b>KM</b> (	3 CNP	
"V 5				YES/NO YES/NO	S.	AMPLE PRESI	ervation/am	T of REAGE	ACA : TN	
		-		C LAB(S):			QC SAM	PLE TIME:_	4.6	
AMPLE I	D (V	ERIFY): <u>ム</u> ・	-788/ <i>3</i>	ues	T	ME COLLECT	ED:	120	6	
	OJEC 3em	T / ANA	LYTICAL	LAB /REQ	UESTED A	NALYSIS/			E OF CONTAINERS	
	3EM		CLABS-BA CLABS-BA	••	E120. E150.	1	1	250	mL Polyethylene	
	ЗЕМ		CLABS-BA		E300.0:		1	250	mL Polyethylene	
	3CM		CLABS-BA		E601		1 3		mL Polyethylene	
•	<del>~÷B</del> M	•	FGLSTK		SM9221;		3		L Glass VOA vial	1000

Added 2.002 of CC

Revision: 01/30/2009

		Date: 09-Nov-			Month:	Norm Qtr:	4 Norm	Year: 2009 WW
WELL I	D:	₩~7E	او		AREA INFO		6300/GS	A/CGSA
DATE:_	09-N	lov-2009	LOG BOO	К (росим	ENT CONTROL	u) #:	AA19(	)20
PURGE	METHOD/SAMPL	E METHOD:	GF / 3	VES	CONTAMINAL	NT PRESENT:_		ND
SCREEN	ED INTERVAL:	61.68	- 80.88		PUMP INTAK	E DEPTH:		78.00
DEPTH (	OF CASING:	80.	88		CASING DIA	METER:		4.50
DEPTH 1	TO WATER:	18,	0구		VOLUME FAC	TOR:		0.826
WATER 1	IN CASING (f	t): <u>6</u>	18.5		CASING VOL	(Gal/Time):	51.8	8 x 3cu = 155,64
TIME PU	MP ON:	1036	·····	***************************************	INITIAL FL	OW RATE (Q=G	SPM):	3,0
TIME PU	MP OFF:	1137_			MEASURED B	FLOW METER	/ GRAD CI	L./ BUCKET/ OTHER
TIME	Q GAL PUI	RGED VOLUMES	Hq	TEMP C	sc	mV	OG	DTW
1054	51.8	8 1	6.41	20.8	1369	37	\	29.21
1111	104		8.41	21.2	12,28	-83		29.41
1128	156	3	8,37	21.5	1480	-124	\	79,63
1130			6,38	21.3	1477	-120		
1132			8,39	21.3	1470	-123		
				<u></u>			·····	
eter H :	SERI 670	IAL # CAI 2454	IBRATED YES/NO	s.	AMPLER /EMI	PLOYER:	sil	7890
C :			YES/NO		ROJECT:		3EM	G 3CMP
v :			YES/NO				OI KEAGE	MII
C SAMPL	E ID: CGSAPB	Q	C LAB(S)	: FGLST1	K, BCLABS-E	NAK OC SAMP	LE TIME:_	
AMPLE II	D (VERIFY):_	W-72/	-SUES	T	ME COLLECT	ED:	1137	
		ANALYTICAL 1						· <del></del>
FR								PE OF CONTAINERS
FM	3EMG	BCTWR2~RVI	(	E120.	1	1	250	ML Polvethylene
FR	3emg 3emg	BCLABS-BAI	ζ .	E150.	1	1	250 250	mL Polyethylene mL Polyethylene
FA	3EMG	BCTWR2~RVI	ς τ		1 NO3		250	mL Polyethylene mL Polyethylene mL Polyethylene

Added 11 oz of CC

Revision: 01/30/2009

Tar	rget S	ample Date:	11-Aug-	2009		Month:	Norm Qtr:	3 Norm Ye	ar: 2009	Mans
WELL I	υ:		W-785						CGSA	\w <sup>-</sup> /
							L) #:			
							NT PRESENT:			
SCREEN	ED INT	ERVAL:	19.48	- 22.48		INTAKE DEF	PTH:	0	.00	
DEPTH (	OF CAS	ING;	22.	48		CASING DIA	METER:		4.50	
DEPTH (	TAW OI	ER:	16.	41		VOLUME FAC	TOR:	0	926	
WATER	IN CAS	ING (ft):	6.	07		CACTNO HOL	(Gal/Time)	- ، -	.040	
TTME SE	IMP ON		<u></u>	217		CASING VOL	(Gal/Time)	: <u>&gt;, \                                  </u>	- 15	<u>Carl</u>
							OW RATE (Q=			
TIME PU	MP OF	r:				MEASURED B	Y FLOW METE	R GRAD CYL	./ BUCKET	/ OTHER
TIME		GAL PURGED				sc	mV	-		
0817		5	(	7.40			1	OG 1	DTW	
	<del> </del>		······		22.6	1653	79		16.55	
0822	<del> </del>	10	2	7-36	72.8	1657	43	1	16.61	
0877		15	3	1.35	23,00	1659	-66		16.62	
0619				7.35	22.8	1660	-59			
0831				7.33	77.8	1660	-53			
		-				<u>`</u>				
			-				ļ		-u	
METER		SERIAL #	CAI	LIBRATED	c	AMDYED /mw	DI AVED			
рн :	<del></del>	670571		YES/NO	P	ROJECT:	PLOYER:	silva 3CMP		<del></del>
SC :				YES/NO			ervation/am			***************************************
120:				YES/NO						<del></del>
				_YES/NO						
C SAMPL	E ID:W	I-7PY		C LAB(S):	FGLST	K, BCLABS-I	BAK QC SAMI	PLE TIME:	0747	·
			112/3		T.	TWE COLLECT	red:	0837		
PR	OJECT	/ ANA	LYTICAL :	LAB /REQ	UESTED A	ANALYSIS/	QUANTITY	<b>ସ</b> ር ሂጥ ኒ	OF CONTA	THERE
	3CMP	В	CLABS~BA	К	E601		3		Glass VO	
	3MRP		CLABS-BAI		SSANIC	ONS	1		l Polyeth	
	3MRP		CLABS-BAI		SIMETA		1		1 Polyeth	
	3MRP		CLABS-BA		BMETALS:	FILTER	0		l Polyeth	
	3MRP~		CLABS-BAI		SSWETC		2	500m	l Polyeth	ylene
	J.M.E.		FGLSTK		SM9221:	SRO	1	250 mb Ste	ilized P	olyethylene

No Sample der SMAZZI: SHO Adhel 2.0 02 of CL

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 23.7900009 gal.

Revision: 01/30/2009

Target	: Sample Date:	12-Aug-	2009		Month:	Norm Qtr:	3 Norm Y	rear: 2009 (W)
WELL ID:		W-7PS			AREA INFO;		8300/gs2	V/CGSA W
	12-Aug-2							
								E-3/NO3-17
	INTERVAL;							
DEPTH OF (	CASING:	22.	48		CASING DIA	METER:		4.50
DEPTH TO V	VATER:	16.3	<u></u>		VOLUME FAC	ror:		0.826
								Bev = 1561
								1.0
								L./ BUCKET/ OTHER
	GAL PURGED				sc		OG	DTW
0937	5,0	1	7.19		1687	1	l	16.65
942	(0.0	2	7.14	23.1	-	644	l	16.65
947	(5.0	3	7.16	23.2	1676		(	16,63
0949			7.15	23.2				
0951			7,13	22.9	(669	625	<del></del>	
							······	
							***************************************	
ETER	SERIAL #	CA	LIENATED	S	AMPLER /EMI	PLOYER:	a41+	
;	62051	<u>u</u>	yes\no	P	ROJECT:		3CM	P 3MRP
` ; <u></u> _			Kes/no Kes/no	S	AMPLE PRESE	ERVATION/AM	r of REAGE	NT: ~7—
SAMPLE I	D: <b>W-7PY</b> VERIFY):	ا ۲۴۶ - در	<u> </u>		IME COLLECT	'ED:	<u>09</u> 5	0834 TY
PROJE <del>, 3€</del>	CT / AN	ALYTICAL BCLABS-BA	LAB /REC	UESTED A	ANALYSIS/	QUANTITY	Y /TYF	PE OF CONTAINERS
	RP	CLABS-BA	K	SOM CO		1		Mr Glass VOA vial Oml Polyethylene
<del>-3M</del>		SCLABS-BA SCLABS-BA		S3META		1	500	ml Polyethylene -
~3m		CLABS-BA		METALS: S3WETC				ml Polyethylene
3M	RP	FGLSTK		SM9221:		1		ml Polyethylene erilized Polyethylen
			ON	ly Sam	apled SV	wazi:s4o L		

NOTE:

İ

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 23.7900009 gal. Revision: 01/30/2009

Targ	et Sample Date	: 04-Nov-2	009		Month:	Norm Qtr:	4 Norm Ye	ear: 2009 (W)
WELL ID:	·	W-7PS			AREA INFO:_		8300/GSA	/CGSA
DATE:	04-Nov-2	009	LOG BOOK	(DOCUME	NT CONTROL)	#:	AA1901	l B
PURGE ME	ETHOD/SAMPLE ME	THOD:	GF / 3V	ES	CONTAMINANT	r PRESENT:	TCE	-3/NO3-17
SCREENEI	INTERVAL:	19.48	- 22.48		INTAKE DEPT	H:		0.00
рертн ог	CASING:	22.	48		CASING DIAM	ETER:		4.50
рертн то	WATER:	76	Ha 17	,51	VOLUME FACT	OR:		0.826
								-300 4.1 + 3co
								1.0 a
							<b>\</b>	L./ BUCKET/ OTHE
	Q GAL PURGED					mV	QG	DTW
1114	4.1	1	7.05		1685	121		17.81
1118	8,2	2	6.99	<del> </del>	1685	104	ì	17.83
1122	12.3	3		24.7	<u> </u>	103	t	17.87
1124			6,99	24.9		108		1111
1126			7.01	24.6		107		
			•		\			
ETER	SERIAL	# C3	LIBRATED	·				
H :	6100	85	YES/NO	1	SAMPLER /EMI PROJECT:		3 <b>E</b> M	G 3CMP
			YES/NO	٤	SAMPLE PRESE	ervation/an	IT of REAGE	ENT: UM
20:			_(YZS/NO					
		,						
AMPLE II	(VERIFY):	1-7.85	3065	1	TIME COLLECT	ED:	11 33	2
PRO		NALYTICAL	LAB /RE	QUESTED	ANALYSIS/	QUANTIT	Y /TY	PE OF CONTAINERS
	3EMG	BCLABS-BA		E120		1		mL Polyethylene
	3emg 3emg	BCLABS-BA		E150		1		mL Polyethylene
	3CMP	BCLABS-BA BCLABS-BA		E300.0		1		mL Polyethylene L Glass VOA via
	~~~/*		74%	EOU	L	3	4U I	RL GIABB VUA VIA

Added 2.0 or of CL

. .

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 23.7900009 gal.

Revision: 01/30/2009

Target Sa	ample Date:	05-Nov-2	009		Month:	Norm Qtr: 4	Norm Ye	ear: 2009	mon,
WELL ID:		H-7PS			AREA INFO:		8300/GSA	CGSA	
DATE:	05-Nov-20	09	LOG BOOK	(DOCUME	NT CONTROL	) #:	-AA1901	+ A419019	
PURGE METHOD	/SAMPLE MET	HOD:	GF / 3V	ES	CONTAMINAN	T PRESENT:	TCE	-3/NO3-17	y - Apyrichidalychidalaqq
SCREENED INT	ERVAL:	19.48	- 22.48		INTAKE DEPT	CH:		0.00	
DEPTH OF CAS	ING:	22.	18		CASING DIAN	METER:	*****	4.50	
DEPTH TO WAT	ER:	17.9	54		VOLUME FACT	ror:		0.826	
WATER IN CAS									- oal
TIME PUMP ON									
TIME PUMP OF									
TIME Q	GAL PURGED	VOLUMES	Нq	TEMP C	sc	mV	OG	DTW	
1143	4.0		7.03	23.4	1709	218	1	17.88	
1147	4.0	2	7.05	24.0	1684	183	(	11.88	
1151	120	3	7.02	23.8	1681	127	)		
1153			7.02	23.7	1689	121			
1155			7.03	23.2	1689	118			
				***************************************					
METER pH: SC: mV:		SS CA	LIBRATED YES/NO YES/NO YES/NO	Y	ROJECT:	PLOYER:	3EM0	a90 3 3CMP NT: ///	
QC SAMPLE ID:	-	(	LYPS/NO	·		QC SAMI	PLE TIME:_	<b>-</b>	•
SAMPLE ID (VE	RIFY):	J.7PS	13025	т	IME COLLECT	red:	1/59	)	<del></del>
PROJECT	/ AN	ALYTICAL CLABS-DA		QUESTED		QUANTIT		E OF CONTAIN	
2EMC		CLADS BA		B150		1		mL Polyethy	
-3 <del>23</del> 43		CLADO DA		<del>2300:0</del>		<u></u>	250	ur koråetuå	Tene
- SCHT 3EMG		FGLSTK	Т.	E60 SM9221			- +	<del>L Glass VOA</del> erilízed Pol	

Eunevaled all CL

NOTE:
Purge rate/time: N/A since est\_sus\_flow = 0
Purge Volume: 23.7900009 gal.

Revision: 01/30/2009

Targ	et Sample Date	: 12-Aug-2	009		Month:	Norm Qtr:	3 Norm Y	ear: 2009 (WGW
WELL ID:		W-26R-01			AREA INFO:		5300/GSA	/EGSA
DATE:	12-Aug-	2009	LOG BOOK	(DOCUME	ENT CONTROL	) #: <u> </u>	AA1714	15
PURGE ME	THOD/SAMPLE MI	ethod:	GF / 3V	<b>K</b> 8	CONTAMINAN	T PRESENT:	*TCI	-15/NO3-40
SCREENEL	INTERVAL;	22.72	27.72	····	PUMP INTAK	E DEPTH:		29.00
DEPTH OF	CASING:	30.0	0		CASING DIA	METER:		4.50
DEPTH TO	WATER:	18.	<b>1</b>			ror:		
WATER IN	CASING (ft):		- 2					3 = 27.9
TIME PUM	P ON:	1123						1.0
								L./ BUCKET/ OTHER
	Q GAL PURGE				_	mV	. OG	DTW
1132	9.3	\\	7.36	24.2	1420	13		८/. ३४
1141	18.6	2	4-41	24.3	1418	30	(	21.59
1150	27.9	3	7.40	24.3	(438	45	(	21.84
1152			739	24.2	1421	45		
1154			7.38	22-9	1410	4(	· · · · · · · · · · · · · · · · · · ·	
ETER	SERIAL		IBRATED	s	AMPLER /EMI	PLOYER:	ed iv	
C :_	62051	19	YES/NO	P	ROJECT:		3MRI	)
V : 20:			YES/NO	5	AMPLE PRESI	ERVATION/AM	T OF REAGE.	NT:
			YES/NO					
AMPLE ID	(VERIFY):	()-16n-c	>1/30E)	T:	IME COLLECT	ED:	1157	····
	JECT / AJ	NALYTICAL I	AB /REQ	UESTED A	ANALYSIS/	QUANTIT	Y /TYP	E OF CONTAINERS
	3MRP 3MRP	BCLABS-BAR BCLABS-BAR	Ĺ	SSANIC	ons	1	250	ml Polyethylene
	3MRP	BCLABS-BAR		S3META METALS:		1		ml Polyethylene
	3MRP	BCLABS-BAK		S3WETC		2		ml Polyethylene ml Polyethylene
	3MRP -	FGLSTK	······································	SM9221:			250 mb St	erilized Polyethyle

NU Sample for SM922/:SHO Adeled 2.0 02 of CL

Revision: 01/30/2009

	Sample Date:							Year: 2009 ( ))
WELL ID:		W-26R-0	1		AREA INFO:		S300/GS	A/EGSA
DATE:	13-Aug-2	009	LOG BOOK	(DOCUM	ENT CONTROL	,) #:	AA171	.456
PURGE METH	OD/SAMPLE ME	THOD:	GF / 3V	/RS	CONTAMINAN	T PRESENT:	*TC	E-15/NO3-40
SCREENED II	NTERVAL:	22.72	- 27.72		PUMP INTAK	E DEPTH:		29.00
DEPTH OF C	ASING:	30.	00		CASING DIA	METER:		4.50
DEPTH TO WA	ATER:	18.	71		VOLUME FAC	TOR:		0.826
WATER IN CA	ASING (ft):	11	19		CASING VOL	(Gal/Time)	: 9.3	130 = 27.9
TIME PUMP C	ON:	110	υ		INITIAL FLO	OW RATE (O=	GPM)	1:0
	)FF:							L./ BUCKET/ OTHER
TIME Q	GAL PURGED			TEMP C				
ruo	9.3	1	7,31	342	1496	724	<u>oc</u>	DTW 2 / S 2
1119	18 G	2	7-21	23.6	†	711	<u>'</u>	2/.83
1178	27.9	3	7.32	25.9	1426	687	(	22.14
1130			7.30	23.7				27-31
1132	-		7,3/	23, 2	1420	63/	<u></u>	
			<u> </u>	2), C	1424	601		
			·····					
: :	serial #	2114	LIBRATED VEF/NO VES/NO VES/NO VES/NO	₽	AMPLER /EMI ROJECT: AMPLE PRESE		3MIR	P
SAMPLE ID	:		C LAB(S):			QC SAM	PLE TIME:	
MPLE ID (V	ERIFY): U	-26n-0	345	т	IME COLLECT	ED:	114	1
PROJEC'	, , ,	LYTICAL	( Lab /req	UESTED A	ANALYSIS/	QUANTIT	Y /TYI	PE OF CONTAINERS
AME AME	-	CLABS-BA CLABS-BA		SSANIC		1	250	ml Polyethylene -
"3MR	***	CLABS-BA		SSMET: METALS:			500	ml Polyethylene
<del>3MR</del> 3MR		CLABS-BAI FGLSTK		SAMETO SM9221:	нем	1	500	ml Folyethylene   ml Folyethylene *   erilized Polyethyle
		EN EN	ly Sam, neva h	n bed o	6- 8mg	221:546	;	

Revision: 01/30/2009

Tar	get Sample Date	: 04-Nov-20	09		Month:	Norm Qtr:	4 Norm Y	ear: 2009 (WGA)	
WELL ID	) i	W-26R-01			AREA INFO:		8300/GSA	/EGSA W	
DATE:	04-Nov-2	009	LOG BOOK	(DOCUM	ENT CONTROL	) #:	AA190	18	
PURGE M	ETHOD/SAMPLE ME	THOD:	GF / 3V	ES	CONTAMINAN	T PRESENT:	*TCE	-15/NO3-40	
SCREENE	D INTERVAL:	22.72 -	27.72		PUMP INTAKI	E DEPTH:	29.00		
DEPTH O	F CASING:	30.0	0	·····	CASING DIA	METER:	4.50		
								0.826	
								30- = 25,2	
TIME PU	MP ON:	0 <b>848</b>	<u>-</u>		INITIAL FLO	OW RATE (Q=	GPM): /, O		
TIME PU	MP OFF:	0924			MEASURED BY	Y:FLOW METE	R/ GRAD CY	L./ BUCKET/ OTHER	
TIME	Q GAL PURGED	VOLUMES	pН	TEMP C	sc	mV	OG	DTW	
0856	8	1	7.18	22.9	1426	57	ţ	22.53	
0905	16	2	7.21	23.3	1428	32	١	23.05	
0913	24	3	7.20	23.7	1430	14	ł	73.30	
A00115			7.19	22.9	1428	71			
0917			7.20	23.2	1433	6			
METER	SERIAL	# CAL	I RATED		Sampler /em	PLOYER:	sil	va90	
pH :	Glas	755	YES/NO	:	PROJECT:		3EM	G 3PSDMP	
SC :			YES/NO YES/NO	:	SAMPLE PRES	ERVATION/A	IT of REAG	ent: APC	
H20:			YBS/NO						
QC SAMPL	E ID: W-26R-79Y	ο	CLAB(SP)	M.STK, B	CLABS-BAK,	CALTEST SAN	APLE TIME:	1303	
SAMPLE I	D (VERIFY):	W-262-01	3085		TIME COLLEC	TED;	0924		
PR	OJECT / A	NALYTICAL :	LAB /RE	QUESTED	ANALYSIS/	QUANTI	гу /тү	PE OF CONTAINERS	
					E120.1 1 250			mL Polyethylene	
	3EMG	BCLABS-BA		E150	).1		1 250 mL Polyethylene		
	3EMG	BCLABS-BAI		E300.0		1	250 mL Polyethylene		
	3PSDMP	CALTEST		E60		3		mL Glass VOA vial	
	- JEMG FGLSTK			SM9221	:SHO	1	250 mL S	terilized Polyethylen	

Adelel 20 or of CL to well

Revision: 01/30/2009

Target	Sample Date:	05-Nov-	2009		Month:	Norm Qtr:	4 Norm Y	rear: 2009 ( ))
WELL ID:		₩-26R-0	1		AREA INFO	2	8300/GSJ	A/EGSA
								19
								E-15/NO3-40
								29.00
								4.50
	ATER:		_					0.826
WATER IN C	ASING (ft):_	10,						300 2 75,2
	ON:							1.00
TIME PUMP	OFF:							L./ BUCKET/ OTHER
	GAL PURGED	VOLUMES	рН	TEMP C	sc	mV	OG	DTW
1807	8.4	1	7.18	72.8	1521	483	1	22.58
1016	16.8	7	7.22	23.4	1457	392	1	22.90
1024	25.2	3	7.17	22,9	1453	182	1	2302
1026			7,18	27.7	1451	108		
1028			7.17	22.7	1450	103		
						<u></u>		
ETER H:	SERIAL A	CA	LIFRATED	S	AMPLER /EM	APLOYER:	sil	va90
C #				S	ROJECT: AMPLE PRES	T		IG 3PSDMP ENT: NA
7 : 20:	····		YES/NO					
SAMPLE I	D: <u>W-26R-79Y</u>	(	<b>™</b> (ノ	LSTK, BO	CLABS-BAK,	CALTEST SAM	/o PLE TIME:	18 10301083
	-رما_: (VERIFY						_	
PROJEC	CT / AN	ALYTICAL	LAB /REC	UESTED .	ANALYSIS/			PE OF CONTAINERS
,	HO	BCLABS-BA	*		:-1		250	mi Polyethylene
	#G	<del>-curuc-da</del>	<del>K</del>		.NO2	1	250	ML Polyethylene
-20	ерир-	CALPECT		350000 B60				mb Polyethylene
3E		FGLSTK		SM9221		1		terilized Polyethy

Evacua tedallel from well

Revision: 01/30/2009

Tarq	get S	Sample Date:	10-Aug-2	009		Month:	Norm Qtr: 3	Norm Ye	ear: 2009 (WGW)
WELL ID	):	······	W-26R-05			AREA INFO:		8300/GSA	/EGSA
DATE:		10-Aug-20	109	LOG BOOK	(DOCUM	ENT CONTROL	.> #:	AA1714	13
PURGE M	ŒTHOI	D/SAMPLE MET	HOD:	PB / 90	BA	CONTAMINA	NT PRESENT:	TCE-	3.3/NO3-53
SCREENE	D IN	rerval:	22.05	27.05		INTAKE DEF	TH:		0.00
									4.50
DEPTH T	raw o	PER:	22.4	6	<del> </del>	VOLUME FAC	TOR:	···	0.826
		SING (ft):							90% = 3.06
		1:					ÓW RATE (Q≕G		
TIME PU	MP OF	'F:						, ,	L. BUCKET OTHER
TIME	2	GAL PURGED	VOLUMES	На	TEMP C	sc	Vm	OG	DTW
1211		3,5	90%	7.84	22.5	1082	133	{	25,31
								······	
-									
								<del></del>	
METER		SERIAL #	CAI	LIBRATED	\$	SAMPLER /EM	IPLOYER:	silv	a90
эн : эс :		6205	11.9	KES/NO	I	PROJECT:		3MR	
nV :				YES/NO		MATER FRES	ERVATION/AM:	OI REAGE	NT:
				_YES/NO					
				,					
AMPLE II	D (VE	RIFY):	-26A-C	5/901	<u>3/4</u> 1	IME COLLEC	TED:	121	1
PRO	OJECI						QUANTITY		PE OF CONTAINERS
	3MRI 3MRI	-	BCLABS-BA: BCLABS-BA:		SSANI		1		ml Polyethylene
	3MRI	<u> </u>	BCLABS-BAI BCLABS-BAI		S3MET		1		ml Polyethylene
	~		ואממתחם	· >.	JULTALS:	: FILTER	0	500	ml Polyethylene
	3MR	P 1	3CLABS-BAI	К	S3WETO	TURM	2		ml Polyethylene

No Sample for SM9221:SHO
Adeled , 3 02 of CL.

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 10 gal. Revision: 01/30/2009

	Targ	get Sample Date	: 13-Aug-	2009		Month:	Norm Qtr:	3 Norm Y	ear: 2008 W
	WELL ID	;	W-26R-0	5		AREA INFO	1	6300/G8A	/EGSA
	DATE:	13-Aug-2	009	LOG BOOK	(DOCUME	ENT CONTRO	L) #:	<b>AA171</b>	10 to to to
	PURGE M	ETHOD/SAMPLE ME	THOD:	PB / 90	BA	CONTAMINA	NT PRESENT:_	TCE-	3.3/NO3-53
į	screene:	D INTERVAL:	22.05	- 27.05		INTAKE DEI	PTH:		0.00
1	DEPTH O	F CASING:	26.	68		CASING DIA	AMETER:		4.50
1	DEPTH TO	O WATER:	23.	60		VOLUME FAC	TOR:		0.826
									10% = 2,25
1	TIME PUN	MP ON:				INITIAL FI	OW RATE (Q=	GPM):	
									L)/ BUCKET/ OTHE
_		Q GAL PURGED				sc	mV		DTW
ιL	0717		D.O	7.66	22.5	1270	748	l	D .6
1	254		D.0	7.56	20.0	1294	762	ŀ	00
4	0953		0.0	1.32	20.7	1178	730		
L	1528		0,0	7.71	2 Z. <b>.C</b>	1157	6/6		
ŀ	019	2.25	90%	7-70	23,2	1139	384		
_									
MI pl	ETER H:	sertal Græss	# CA	LIBRATED YAS/NO YES/NO	P	ROJECT:	MPLOYER:	3MR	?
m\ H2	20:			TES/NO					-
QC	SAMPLE	E ID:		QC LAB(S)	:	****	QC SAM	PLE TIME:_	
SA	AMPLE ID	(VERIFY): 12	26 K.05	190BA	T	IME COLLEC	TED:	/033	
	PRO	DJECT / AN	JALYTICAL	LAB /REG	QUESTED A	ANALYSIS/	QUANTIT	Y /TYE	E OF CONTAINERS
			BCLABS-B/ BCLABS-B/	4X	S3ANIC S3META	ONS NES	1 1	250 500	ml Polyethylene ml Polyethylene
		CMRP	BCLABS-BA	3	SMETALS:		<del></del>		ml Polyethylene
	ę	3MRP 3MRP	BCLABS B. FGLSTK	dK .	SMPTC SM9221:		<u>2</u> 1	500	ml Polyethylene:
						- ~		22 cmi oca	erilized Polyeth
			۶.	م. در مین	10	-11 -	L afr	1 1	
			C (	ノムとひへ	<b>*</b>	all C.	u atr	er elecu	10.37

NOTE:

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 10 gal. Revision: 01/30/2009

Ta	rget	Sample Date:	09-Nov-2	009		Months	Norm Qtr:	4 Norm Y	ear: 2009
MEPP I	D1		H-26R-0	5					V ) Kaga
		09-Nov-2							
									-3.3/NO3-53
SCREEN	ED IN	TERVAL:	22.05	- 27.05	···	INTAKE DEP	TH:		0.00
DEPTH (	OF CA	SING:	26.	58		CASING DIA	METER:		4.50
EPTH :	IO WA	TER:	23.2	-					0.826
VATER :	IN CA	SING (ft):	3,4	l		CASING VOT.	(Gal/Time)	. 2.6 ×	90%=2,50
		N:							
		FF:							
TIME		GAL PURGED						R/ GRAD CY	L./ BUCKET/ OTHE
0907	$\top$	3.0		7.68	ZO.3	sc	)	OG	DTW
270 7	╂─┤		10 /0	4.68	10,3	1/52	327		26.09
	-								
		i							
	1-1				<del> </del>				
	L			·····		[			
			ļ					<del></del>	
						l j	-		
		7			1			<del></del>	
		<u> </u>						<u> </u>	
TER		SERIAL #		IBRATED	S	AMPLER /EMI	PLOYER:	#41=	<b>290</b>
<u>:</u>		620249	54	_ YES/NO	P	ROJECT:		3EM	3 3PSDMP
;	·····		·····	YES/NO	s	AMPLE PRESE	RVATION/AM	of REAGE	NT:
:				NES/NO					
Caunt	tr +n-	Pm.				_			
ommpl	w th:	·	Q	C LAB(S):	·		QC SAMP	LE TIME:_	******
MPLE I	D (VE	RIFY):	)-26R-0				ED:		
PR	OJECI	. / ANA	LYTICAL I	1			QUANTITY		
	3EM	5 E	CLABS-BAI		E120.		QUANTITY		E OF CONTAINERS mL Polyethylene
	3EM		CLABS-BAN		E150	. 1	1	250	mL Polyethylene
	3EMC	_	CLABS-BAK		E300.0		1		mL Polyethylene
_	3550	•••	CALTEST FGLSTA		E601		3		L Glass VOA vial

used New Briler Added . 3 oz of CL

Purge rate/time: N/A since est\_sus\_flow = 0 Purge Volume: 10 gal.

Revision: 01/30/2009

	_	t Sample Date:		009		Month:	Norm Qtr:	Norm Y	ear: 2009	Many
				5		AREA INFO:	•••••	5300/GSA	/EGSA	
		12-Nov-20								
		HOD/SAMPLE MET								
	SCREENED	INTERVAL:	22.05	- 27.05		INTAKE DEP	TH:		0.00	·
	DEPTH OF	CASING:	26.	58		CASING DIA	METER:		4.50	
	DEPTH TO	WATER:	25.	18		VOLUME FAC	TOR:		0.826	
	WATER IN	CASING (ft):	1,9	8		CASING VOL	(Gal/Time)	1,6 × 90	8= 1,4	1
	TIME PUMP	ON:	-			INITIAL FLO	OW RATE (Q=0	GPM):	-	
	TIME PUMP	OFF:							L. BUCKET/	OTHER
		GAL PURGED			темр с	sc	mV	OG	√ WTW	
Violog	0827	-+++-	90%	7.67	20.5	1194	665	\	24.92	
11/11/09	0102		90%	7.59	21.2	10/8	211	1	25,18	
11/2/09	0908	144	90%	7.64	139		157	1		
						1,100				
				,						
	ļ									
l						·	Ĺ <u></u>			
	METER ph:	SERIAL	CA.	LIBRATED YES/NO	s	AMPLER /EM	PLOYER:			
	sc :		<u> </u>	YES/NO		******	***-		G 3PSDMP	
]	mV : H2O:			YES/NO						
		ID:	······································							
;	SAMPLE ID	(VERIFY):	w-car	05/90	<u> </u>	IME COLLEC	TED:	0909		
	PROJ	ECT / AN							PE OF CONTA	INERS
		3EMG	BCLABS-BA	NK .	E120	.1	1	250	mL Polyeth	ylene
			BCLABS-BA BCLABS-BA		E150 E300.0	• "	1		mL Polyeth mL Polyeth	
		<b>-</b>	CALTEST		E60		3		mi Polyeth mi Glass VO	-
	;	3EMG	FGLSTK		SM9221		1		terilized Po	
			ρ	acel 2	10 2	times .	daily at	to miti	al Sample	-
		to e	vacual	ger 1	11	., '	J		•	
			,	- 411	u.					

NOTE:

Purge rate/time: N/A since est\_sus\_flow = 0
Purge Volume: 10 gal.

Revision: 01/30/2009

		et Sample			1009		Month:	Norm Qtr:	4 Norm Ye	ear: 2009 \	DOMIN
					?		AREA INFO:		8300/GSA/	/BGSA	
<del></del>	DATE:	12-	-Nov-2(	09	LOG BOOK	( DOCUME	NT CONTROL	) #:	AA1902	0	
	PURGE ME	THOD/SAM	PLE MET	HOD:	PB / 90	ВА	CONTAMINAN	NT PRESENT	TCE-	3.3/NO3-53	
	SCREENED	INTERVA	ŗ:	22.05	- 27.05		INTAKE DEP	TH:		0.00	•••••
										4.50	
	DEPTH TO	WATER:		25.	81		VOLUME FAC	TOR:		0.826	
	WATER IN	CASING (	ft):	1,9	18		CASING VOL	(Gal/Time)	. 1.6 × 90	%= 1,44	
		P ON:						OW RATE (Q=		-	
	TIME PUM	P OFF:		•		i	MEASURED B	Y:FLOW METE	R/(GRAD CYI	BUCKET/ C	THER
	TIME				рн			V	OG	DTW	
Molog	0827	-114		90%	7.67	20.5			\	24.52	
11/11/09	0902			90%		21.2	10/8	711	1	25,18	
11/12/09	0908	1,4		90%	1.64	129		157	l		
•											
										·····	
			,								
•	метер		2D787 4								
	рн:	Ĝ.	145	1	Librated Yes/No	S P	AMPLER /EM ROJECT:	PLOYER:		a90 3PSDMP	
	oc :				YEB/NO		******	<del>~~</del>		NT: NA	
	H2O:				YES/NO						
i	QC SAMPLE	ID:		(	QC LAB(S)	ı		QC SAM	PLE TIME:_	****	
								TED:			
		JECT	/ AN	ALYTICAL	LAB /REG	QUESTED .	ANALYSIS/	QUANTIT	Y /TYP	E OF CONTAIN	ERS
		SEMG SEMG		BCLABS-BA BCLABS-BA		E120		1		mL Polyethyl	
		2BMG		BCLABS-BA		E150 E300.0	• "	1 1		mL Polyethyl	
		3FSDMF		CALTEST		E60:		3		mL Polyethyl L Glass VOA	
		3EMG		FGLSTK		SM9221		1		erilized Poly	
				۵		/ _ +	J	de la ef	Lo mition	1 Sample	
			يم وا	Yur Lanual	geer H	20 2	TIMUS (	ייין די		1 Sample	
				suful	- all	CC.					

Purge rate/time: N/A since est\_sus\_flow = 0
Purge Volume: 10 gal.

Revision: 01/30/2009

Tar	get	Sample Date:	10-Aug-2	009		Month:	Norm Qtr:	3 Norm Ye	ear: 2009	Man	
WELL II	): <u> </u>		W-26R-1	<u> </u>		AREA INFO:		3300/GSA	/EGSA	<u>~</u> /	
DATE:		10-Aug-20	0.09	LOG BOOK	(DOCUME	NT CONTROL	) #: <u> </u>	AA1714	13		
PURGE M	ETHO	DD/SAMPLE MET	HOD:	GF / 3V	Es	CONTAMINAN	T PRESENT:_	TCE-	1.6/NO3-14		
SCREENF	D IN	TERVAL:	18.08	- 28.08		PUMP INTAKI	E DEPTH:		31.08		
DEPTH C	F CA	SING:	29.	28		CASING DIA	METER:	4.50			
DEPTH T	O WA	TER:	16.0	0	,	VOLUME FACT	ror:		0.826		
									u = 33 G	-/	
		N:									
TIME PU	MP O	FF:	0923	···	1	MEASURED BY	:FLOW METE	R GRAD CY	L./ BUCKET/ C	THER	
TIME	Q	GAL PURGED	VOLUMES	На	TEMP C	sc	mV		DTW		
0859			L	7.39	22.0	1589	61	١	16.00		
0805		22-22	2	1.37	22.0	1591	27	-	16.03		
0912		33	3	7.31	22.1	1591	28	ł	16.03		
0914				7.40	71.9	1590	18				
0916				7.33	21.9	1591	2.2				
METER ph :		SERIAL 1		LIBATED ES/NO		AMPLER /EM	PLOYER:	silv 3MR			
SC : mV : H2O:				YES/NO YES/NO YES/NO	S	AMPLE PRES	ERVATION/AM	IT of REAGE	ent: <u>aa</u>		
QC SAMPL	E II	EGSAFB W-26	R-88Y (	QC LAB(S)	: FGLST	K, BCLABS-	BAK QC SAM	PLE TIME:	0958		
SAMPLE I	D (V	ERIFY):	J-26R-1	1 3025	Т	IME COLLECT	red:	0923	<u>,                                     </u>	<del>/////</del> -	
PR	OJEC	T / AN	ALYTICAL	LAB /REC	QUESTED .	ANALYSIS/	QUANTIT	Y /TY	PE OF CONTAIN	IERS	
	314	RP	BCLABS~BA	K	SJANI		1		ml Polyethyl		
	3М	RP	BCLABS-BA		S3MET.	ALS	1	500ml Polyethylene			
	3MI		BCLABS-BA	K s	3METALS:	PALS:FILTER 0			500ml Polyethylene		
						WETCHEM 2 500ml Polyethylene				ene	

No Sample for SM9221:5Ho
Adeled 20 02 of CL

Revision: 01/30/2009

Tar	get	Sample Date:	11-Aug-2	1009		Month:	Norm Qtr:	3 Norm Y	ear: 2009 ( \\)
ELL I	D:		W-26R-1	<u> </u>		AREA INFO:		\$300/GSA	/EGSA
									<b>1</b> 04
URGE I	METHO	DD/SAMPLE MET	PHOD:	GF / 3V	zs	CONTAMINAN	T PRESENT:	TCE-	1.6/NO3-14
									31.08
EPTH (	OF CA	ASING:	29.	2.8		CASING DIA	METER:		4.50
epth 1	ro wa	TER:	15.	97		VOLUME FAC	TOR:		0.826
ater 1	IN CA	SING (ft):	12	31					310 = 32 GJ
ME PL	лир с	N:	1101			INITIAL FLO	OW RATE (Q=	GPM):	2.0
ME PU	MP O	FF:	1129			MEASURED BY	:FLOW METE	R/ GRAD CY	L./ BUCKET/ OTHER
TIME		GAL PURGED				sc	Vm	OG	DTW
07		( (	(	7,67	22-)	मुद्भुप	57	1	15.98
17		77	2	_		1599	42	l	16.02
18		33	3	7-40	22.3	1596		١	16.07_
20				7.4(	22.1	1595	24		
u				7.37	21.9	1593	22		
ER		SERIAL #							
1		620°		rs/no		AMPLER /EM	PLOYER:	silv 3MR	
=				YES/NO YES/NO	s	AMPLE PRES	ERVATION/AM	T of REAGE	NT: NA
SAMPL	E ID	: EGSAFB W-26	R-88Y (	 C LAB(S):	: FGLST	K, BCLABS-1	BAK OC SAM	Pie TIME	1101
									<u> </u>
	OJEC								PE OF CONTAINERS
	-3117	(P	3CLABS-BA	YTICAL LAB /REQUESTED ANALYSIS/ QUANTICAL LABS-BAK SJANIONS 1				250	mi Polvetiviene
	-3MF	•	CLABS-BA		S3MET		- 1	500	<del>ml Polyethyle</del> ne
_		· ·	CLABS-BA	n 5.		LS:FILTER 0 500ml Polyethylene ETCHEM 2 500ml Polyethylene			

Sampled SMAZZI: SHO Evacuated all CC

Revision: 01/30/2009

<u>, J</u>

Taz	get	Sample Date:	05-Nov-2	009		Month:	Norm Qtr:	4 Norm Ye	ear: 2009 (NGM)
WELL I	D:_		W-26R-1	ι		AREA INFO:		S300/GSA	/EGSA
									19
PURGE 1	METH	Od/sample me:	PHOD:	GF / 3V	ES	CONTAMINAN	T PRESENT:	TCE-	1.6/NO3-14
SCREEN	ED I	NTERVAL:	18.08	- 28.08	<u> </u>	PUMP INTAKI	E DEPTH:	· · · · · · · · · · · · · · · · · · ·	31.08
DEPTH (	OF C	ASING:	29.	28		CASING DIAM	METER:		4.50
DEPTH 7	ro w	ATER:	<u>17.</u>	18		VOLUME PACT	ror:		0.826
									30 = 30.0
TIME PU	MP C	ON:	1052	·		INITIAL FLO	OW RATE (Q≖	GPM):	2.0 Q
									L./ BUCKET/ OTHER
TIME	Q	GAL PURGED	VOLUMES	рн	TEMP C	sc	mV	OG	DTW
1057		(0,0)	١	7.11	23.0	1583	164	ţ	17.0%
1102		20.0	٤	7.03	22-9	1611	17(	ţ	17, 18
1107		30.0	2	7.06	77.8	1610	169	(	17.18
1109				7.06	77.5	1600	160		
1111				7.08	22.5	1611	154		
METER		SERIAL #	CAI	YERATED YES/NO	9	AMPLER /EMI	PLOYER:	silv	a90
				YES/NO		ROJECT: AMPLE PRESE			NT:A
mV : H2O:				YES/NO					
QC SAMPL	E II	)1		C LAB(S):	·		QC SAM	PLE TIME:	
SAMPLE I	D (V	erify): <u>U</u>	261-11	3068	т	IME COLLECT	ED:		
	OJEC			,		ANALYSIS/			E OF CONTAINERS
	- 3E	10	<del>CLADS-DA</del>	<del>                                      </del>	E120	:1	<u>t</u>	250	mu rolyethylene
	~9E		JCLABS=BA SCLABS=BA	K	E300.0	. 1 : NO3	1	250	ML Polyethylene
	-301		CLASS-SA		<del></del>				b Class VOA viol
	3E)	4G	FGLSTK		SM9221	:SHO	1		erilized Polyethylene
		ı	•			to Samp	ok port	(NEW)	
			Evar.	rated	all C	۷			

Revision: 01/30/2009

Target Sample Date: 04-Nov-2009						Month:	Norm Otr:	4 Norm Ye	ear: 2009 (WL		
WELL I	):	····	W-26R-11			AREA INFO:		8300/GSA	/EGSA		
DATE:	DATE: 04-Nov-2009 LOG BOOK (DOC						) #:	AA19018			
PURGE 1	ETHO	DD/SAMPLE ME	THOD:	GF / 3V	ES	CONTAMINAN	T PRESENT:	TCE-	1.6/NO3-14		
SCREENE	ED IN	TERVAL:	19.08	- 28.08		PUMP INTAKE	E DEPTH:		31.08		
DEPTH C	F CA	SING	29.2	8		CASING DIAM	METER:		4.50		
DEPTH T	AW O	TER:	17.0	25		VOLUME FACT	ror:	(	0.826		
									x scu = 30.50		
TIME PU	MP O	N:	100	3		INITIAL FLO	W RATE (Q=	GPM) z	2.0		
TIME PU	MP O	FF 1	१७२९		·	MEASURED BY	:FLOW METE	R/ GRAD CY	L./ BUCKET/ OTHER		
TIME	Q	GAL PURGED	VOLUMES	На	TEMP C	sc	mV	OG	DTW		
100%		10.10	(	7.04	23.0	Î	نمہ ا	1	17.09		
1013		2012	2	7.02	23.0	1609	59	l	17.11		
1018		30.3	3	6.99	23.1	1604	134	(	17.11		
1020				7,05	23.1	1609	129				
1022				703	22.9	1607	123				
				-			ATTANA				
METER		serial <i>6100</i>	# CA	LIBRATED RES/NO		SAMPLER /EM					
SC :				YES/NO		PROJECT:			G 3CMP		
mV :				YES/NO							
H2O:				YES/NO							
QC SAMPI	LE II	):		CC LAB(S)	:		QC SAI	MPLE TIME:_			
SAMPLE 1	ED (V	erify): <i>t</i>	J-26R-1	1/3025	1	IME COLLEC	red:	1029	<u> </u>		
PF	ROJEC	T / A			QUESTED	ANALYSIS/	QUANTI	TY /TY	PE OF CONTAINERS		
	3E	MG	BCLABS-BA	K.K	E120	.1	1	250 mL Polyethylene			
	3E		BCLABS-BA		E150		1		mL Polyethylene		
	3EI		BCLABS-BA		E300.0		1 250 mL Polyethyle				
	3C1		BCLABS-BA	ıK	E60			3 40 mL Glass VOA vial			
ZEMG FGLS			FGLSTK		SM9221	:SHO 1 2:		250 mL St	250 mL Sterilized Polyethyles		

Added 2.0 or of CL

Revision: 01/30/2009

Targ	get Sample Date	09		Month: Norm Qtr: 3 Norm Year: 2009						
WELL ID	;	W-25N-20			_ area info: s300/gsa/kgsa ( )					
DATE:	10-Aug-2	009 1	OG BOOK	(DOCUME	ENT CONTROL	) #:	<b>AA</b> 171	13		
PURGE M	ETHOD/SAMPLE ME	THOD;	GF / 3V	ES	CONTAMINAN	T PRESENT:		ND		
SCREENE	D INTERVAL:	14.83 ~	29.83		PUMP INTAKI	E DEPTH:		26.00		
DEPTH O	F CASING:	30.83			CASING DIAM	METER:		4.50		
								0.826		
			_					x3cv= 41.1		
								3,0a		
TIME PU	MP OFF:	0759		······································	MEASURED BY	FLOW METE	R GRAD CY	L./ BUCKET/ OTHER		
TIME	Q GAL PURGED	VOLUMES	нд	TEMP C	sc	mV	OG_	DTW		
0741	13.7		7-27	2).1	1629	-69	(	14.28		
0746	27.4	2	1.30	22.3	1641	-64	ţ	14.29		
0750	41.1	3	7.32	22.3	1643	-58	(	14.29		
0752			7-31	220	1644	-47				
0754			7-30	21-9	1646	-44				
sc :	SERIAL 6	<del></del>	kea/no	F	SAMPLER /EM PROJECT: SAMPLE PRES		3MIR	P		
mV : H2O:			YES/NO							
QC SAMPL	E ID:		LABy(S):	·		QC SAM	PLE TIME:			
SAMPLE I	D (VERIFY):	W·25N-2	0/308	·S1	TIME COLLECT	red:	0759			
PR	3MRP 3MRP	BCLABS-BAK BCLABS-BAK		S3ANI S3MET			250	PE OF CONTAINERS Oml Polyethylene Oml Polyethylene		
	3MRP 3MRP	BCLABS-BAK BCLABS-BAK	-	METALS:	: FILTER CHEM	0 2		Oml Polyethylene		
	3MRP	- FGLSTK			-9HO			500ml Polyethylene 250 mL Sterilized Polyethyle		

No Sample for SM9221: SHO
Added 25 or of Ch

Revision: 01/30/2009

Tar	get	Sample Date:	11-Aug-2	009		Month: Norm Qtr: 3 Norm Year: 2009				
WELL I	D;		W-25N-2	)		AREA INFO: \$300/GSA/EGSA				
		11-Aug-2								
		OD/SAMPLE ME								
									26,00	
									4.50	
DEPTH 7	ro wa	YER:	14.	۲(		VOLUME FAC	TOR:		0.826	
WATER I	N CA	SING (ft):	16	.62		CASING VOL	(Gal/Time)	: 13,8	2300 = 41.4 Gal	
		N:					OW RATE (Q=			
TIME PU	MP C	FF:						<u> </u>	L./ BUCKET/ OTHER	
TIME		GAL PURGED				sc	,mV	0G	DTW	
1013	ļ	13.8		7-33	1	1647	-51	1	14.31	
1016	<u> </u>	27.6		7-32	21.7	1648	-43	١	1431	
1022		41,4		7,39	223	1649		(	14.31	
1024				7,34	22.0	1652	-27		-	
1026				7.36	22.1	(650	-23			
ETER H: C: V:		SERIAL #		LIBRATED LES NO LES NO LES NO LES NO LES NO	P	ROJECT:		3MRI	#90 P NT: NA	
C SAMPL	E ID	:	C	C LAB(S):		<b></b>	QC SAM	PLE TIME:_		
AMPLE I	D (V	ERIFY):	)-52N-50	3089	T	IME COLLECT	FED:	1078		
	OJEC 3MI	T / ANA		LAB /REQ	UESTED A	NALYSIS/	QUANTIT	Y /TYP	E OF CONTAINERS	
	- 3мг	(P	CLABS-BA	K S.		FILTER	•	500	ml Polyethylene ml Polyethylene	
	3MF	_	CLABS-BAI FGLSTK		53WETC SM9221:		<u>3</u> 1	250 mL St	ml Polyethylene erilized Polyethyl	

ONLY Sampled for SM9221: SHO Evacuated all CL

Revision: 01/30/2009

Tar	get	Sample Date:	04-Nov-2	009		Month:	Norm Qtr:	4 Norm Ye	ear: 2009 ( WW		
WELL ID	·:		W-25N-20	)		AREA INFO:		8300/G8A	EGSA /		
DATE:	^	04-Nov-20	109	LOG BOOK	( DOCUME	ENT CONTROL	) #:	<b>AA</b> 1901	8		
PURGE M	ETHO	OD/SAMPLE MET	HOD:	GF / 3V	ES.	CONTAMINAN	T PRESENT:_		ND		
SCREENE	D II	YTERVAL:	14.83	- 29.83		PUMP INTAK	E DEPTH:	<del>.</del>	26.00		
DEPTH O	F C	ASING:	30.8	33		CASING DIAM	ETER:	···	4.50		
DEPTH T	0 W.	ATER:	15,1	4		VOLUME FACT	ror:		0.826		
WATER I	N CA	ASING (ft):	15.	66		CASING VOL	(Gal/Time)	بر نهری <u>ب</u>	300 = 39 Gel		
TIME PU	MP C	)N:	0807			INITIAL FLO	OW RATE (Q∞	GPM):	3.0		
TIME PU	MP C	)FF;	9289			MEASURED BY	FLOW METE	R GRAD CY	L./ BUCKET/ OTHER		
TIME	Q	GAL PURGED	VOLUMES	рН	TEMP C	sc	mV	OG	DTW		
0812		13.0	l	6.92	27.8	1679	9	(	15.26		
08/6		26.0	2	6.96	23.1	1674	518"	(	15.27		
0820		39.0	3	7.00	23.1	1674	527"	l	15,28		
0822				200	23.3	1674	532				
0824				7.01	23.3	1673	গ্রম				
								<b>~</b>			
				***							
METER ph:		SERIAL 7	е са 1085	LIBRATED YES/NO	;	SAMPLER /EM PROJECT:		3RM	G		
*******					ł	SAMPLE PRES	ERVATION/A	AT of REAGE	THE LACE		
		D:EGSAFB		,							
SAMPLE 1	D (	verify):	77-52N -	20/30	<u>ę5</u>	TIME COLLEC	TED:		<b>१८</b> ८		
			*						PE OF CONTAINERS		
			BCLABS-BA		E12		1		mL Polyethylene		
	3E	MG	BCLABS-BA	AK	E150		1		mL Polyethylene		
	3E	MG	BCLABS-BA	AK .	E300.	0:NO3	1	250	mL Polyethylene		
	3E	MG	FGLSTK		SM922	l:SHO	1		250 mL Sterilized Polyethyle		

Alled 2.5 or of CC to well allowed to mix for

Revision: 01/30/2009

DATE: 05-ROY-2009 LOG BOOK (DOCUMENT CONTROL) #: AA19040-[9]  PURCE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: ND  SCREENED INTERVAL: 14.83 - 29.83 PUMP INTAKE DEPTH; 26.00  DEPTH OF CASING: 30.83 CASING DIAMETER: 4.50  DEPTH OF CASING: /5.60 CASING VOLUME FACTOR: 0.826  WATER IN CASING (ft): /5.63 CASING VOLUME FACTOR: 0.826  WATER IN CASING (ft): /5.63 CASING VOL (Gal/Time): /3.0 + 3co - 39.0  TIME PUMP ON: 0928 INITIAL FLOW RATE (Q=GPM): 3.0 Q  TIME PUMP OFF: MEASURED BY FLOW METERS GRAD CYL./ BUCKET/ OTHER  TIME Q GAL PURGED VOLUMES PH TEMP C SC MY OG DTW  0932	Targ	et Sample Date	: 05-Nov-	2009		Month:	Norm Qtr:	4 Norm Ye	ear: 2009 (U)
PURCE METHOD/SAMPLE NETHOD; GF / 3VES CONTAMINANT PRESENT: ND  SCREENED INTERVAL: 14.83 - 29.83 PUMP INTAKE DEPTH: 26.00  DEPTH OF CASING: 30.83 CASING DIAMETER: 4.50  DEPTH TO WATER: /5.10 VOLUME FACTOR: 0.826  WATER IN CASING (ft):   5.63 CASING VOL (Gal/Time): 17.0	WELL ID	:	W-25N-2	0		AREA INFO:		5300/GSA	/EGSA
SCREENED INTERVAL: 14.83 - 29.83   PUMP INTAKE DEPTH: 26.00	DATE:	05-Nov-	2009	rog Book	( DOCUME	ENT CONTROL	) #:	AA1901	019
DEPTH OF CASING: 30.83 CASING DIAMETER: 4.50  DEPTH TO WATER: /S. 10 VOLUME FACTOR: 0.826  WATER IN CASING (ft): /S.63 CASING VOL (Gal/Time): /S.O \ \ \frac{3}{2} \cdot \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	PURGE MI	ethod/sample mi	THOD:	GF / 3V	ES	CONTAMINAN	T PRESENT:		ND
DEPTH TO WATER: /5.20  WATER IN CASING (ft):   5.63   CASING VOL (Gal/Time):   13.0	SCREENE	O INTERVAL:	14.83	- 29.83		PUMP INTAKI	E DEPTH:	······	26.00
DEPTH TO WATER: /5.20  WATER IN CASING (ft):   5.63   CASING VOL (Gal/Time):   13.0	DEPTH OF	CASING:	30.	83		CASING DIA	METER:		4.50
WATER IN CASING (ft):   5.63   CASING VOL (Gal/Time):   13.0	DEPTH TO	WATER:	15.	20					
TIME PUMP ON: O928 INITIAL FLOW RATE (Q=GPM): 3. Q  TIME PUMP OFF: MEASURED BY:FLOW METER GRAD CYL./ BUCKET/ OTHER  TIME Q GAL PURGED VOLUMES PH TEMP C SC MV OG DTW  0432 13.   G.96 233 1673 1000   15,28  0936 26 2 6.99 234 1672 27   15,30  0941 39 3 703 234 1673 17   15,31  0943 7.02 23.2 1673 17   15,31  0943 7.02 23.2 1673 18  METER SERIAL * CALIBRATED FROJECT: SIMMO SAMPLE PRESERVATION/AMT OF REAGENT: ADA  METER SERIAL * CALIBRATED FROJECT: SIMMO SAMPLE PRESERVATION/AMT OF REAGENT: ADA  METER SERIAL * CALIBRATED FROJECT: SIMMO SAMPLE PRESERVATION/AMT OF REAGENT: ADA  METER SERIAL * CALIBRATED FROJECT: SIMMO SAMPLE PRESERVATION/AMT OF REAGENT: ADA  METER SERIAL * CALIBRATED FROJECT: SIMMO SAMPLE PRESERVATION/AMT OF REAGENT: ADA  METER SERIAL * CALIBRATED FROJECT: SIMMO SAMPLE PRESERVATION/AMT OF REAGENT: ADA  METER SERIAL * CALIBRATED FROJECT: SIMMO SAMPLE PRESERVATION/AMT OF REAGENT: ADA  METER SERIAL * CALIBRATED FROJECT: DEMPT OF CONTAINERS SAMPLE ID: CALABS BAK BIZO.1 1 250 ML POLYCHYLORD SEME BOLLADS BAK BIZO.1 1 250 ML POLYCHYLORD	WATER IN	CASING (ft):	15	.63		CASING VOL	(Gal/Time)	: 13.0	+3cu= 39.0
TIME   Q   GAL PURGED   VOLUMES   PH   TEMP   C   SC   MV   OG   DTW									
0932   13	TIME PUM	IP OFF:				MEASURED BY	IFLOW METE	R∕√GRAD CYI	L./ BUCKET/ OTHER
C936   26   2   6.99   234   1672   27   15.30	TIME	Q GAL PURGED	VOLUMES	Нq	TEMP C	sc	mV	OG	DTW
0945	0932	13.	1	6.96	27.3	1673	100	1	15,28
O943 7.07 23.2 1671 22  O945 7.62 73.7 1673 18  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVA90 PROJECT: 3EMG SEC: YES NO SAMPLE PRESERVATION/AMT OF REAGENT: NA  VES NO YES NO PROJECT: JEMO OC SAMPLE ID:EGSAPB QC LAB(S): PGLSTK, BCLABS-BAK QC SAMPLE TIME: O948  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS / QUANTITY /TYPE OF CONTAINERS  PROJECT /	0936	26	2	6.99	234	1672	27	(	15.30
METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  PROJECT: 3EMG  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO PROJECT: 3EMG  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVE90  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLE PROJECT: 120  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLE PROJECT: 120  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  METER SERIAL # CALIBRATED SAMPLE PROJECT: 120  YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: 120  YES/NO SAMPLE	0941	39	3	703	23.4	1673	17	(	15, 31
METER SERIAL # CALIBRATED SAMPLER /EMPLOYER: SILVA90  PH: GLOSS #EX/NO PROJECT: 3EMG  SEC: YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: ALA  WES/NO YES/NO  CC SAMPLE ID: EGSAPB QC LAB(S): FGLSTK, BCLABS-BAK QC SAMPLE TIME: OF 48  SAMPLE ID (VERIFY): U-2 <	0943			7.02	23.2	1671	22		
PROJECT: 3EMG SAMPLE ID:EGSAPB  QC LAB(S): FGLSTK, BCLABS-BAK QC SAMPLE TIME:  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / BCLABS BAK E120.1 1 250 mL Polyothylone  PROJECT BCLABS BAK E150.1 1 250 mL Polyothylone  DEMO BCLABS BAK E150.1 1 250 mL Polyothylone  DEMO BCLABS BAK E150.0 1 250 mL Polyothylone	0945			7.02	23.2	1673	18		
PROJECT: 3EMG SAMPLE ID:EGSAPB  QC LAB(S): FGLSTK, BCLABS-BAK QC SAMPLE TIME:  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / BCLABS BAK E120.1 1 250 mL Polyothylone  PROJECT BCLABS BAK E150.1 1 250 mL Polyothylone  DEMO BCLABS BAK E150.1 1 250 mL Polyothylone  DEMO BCLABS BAK E150.0 1 250 mL Polyothylone			<u> </u>				,		
PROJECT: 3EMG SAMPLE ID:EGSAPB  QC LAB(S): FGLSTK, BCLABS-BAK QC SAMPLE TIME:  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / BCLABS BAK E120.1 1 250 mL Polyothylone  PROJECT BCLABS BAK E150.1 1 250 mL Polyothylone  DEMO BCLABS BAK E150.1 1 250 mL Polyothylone  DEMO BCLABS BAK E150.0 1 250 mL Polyothylone									
PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / ANALYTICAL LAB / REQUESTED ANALYSIS / QUANTITY / TYPE OF CONTAINERS  PROJECT / BCLABS BAK E150.1 1 250 mL Polyothylone  BCLABS BAK E150.1 1 250 mL Polyothylone  DBMS DCLABS BAK E300.0:NO3 1 250 mL Polyothylone	рн:		# C#	EJ/NO	I	PROJECT:		3 RING	9
PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS/ QUANTITY /TYPE OF CONTAINERS	nV :			YES/NO	5	SAMPLE PRES	ervation/al	AT of REAGE	NT:
PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS/ QUANTITY /TYPE OF CONTAINERS	QC SAMPLE	ID: EGSAPB		QC LAB(S)	: FGLS1	CK, BCLABS-1	BAK OC SAM	PLE TIME:_	0948
PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS/ QUANTITY /TYPE OF CONTAINERS  THE BOLABS BAK E150.1 1 250 mL Polyethylono  THE BOLABS BAK E150.1 1 250 mL Polyethylono  THE BOLABS BAK E300.0:NO3 1 250 mL Polyethylono	SAMPLE II	(VERIFY): (	2-25/10-2	0/3049	<u> </u>	TIME COLLECT	TED:	0948	3
SENC BCLABS BAK E150.1 1 250 mL Polyothylono SENG BCLABS DAK E300.0:NO3 1 250 mL Polyothylone	PRO	DJECT / A	NALYTICAL	LAB /RE	QUESTED	ANALYSIS/	QUANTIT	ry /ryr	PE OF CONTAINERS
DBM9 DCLAD9-DAK B300.0:NO3 1 250 mL Polyethylone		3 <del>2HC</del>	DCLARS D	<b>AK</b>	F150	1_1	1	250	mr Polyethylene
3EMG FGLSTK SM9221:SHO 1 250 mL Sterilized Polyethyle		3EMG	<del>- DCLADS-D</del> FGLSTK	15	<del>19300.0</del>	:NO3	<del></del>	250	mir Polycthylene

Executed all CL

Revision: 01/30/2009

Tar	get	Sample Date:	11-Aug-	2009		Month:	Norm Qtr:	3 Norm Y	ear: 2009 (V)
WELL I	D:		W-25N-2	2		AREA INFO:		3300/GSJ	/EGSA
		11-Aug-2							
PURGE 1	METH	OD/SAMPLE ME	PHOD:	GF / LV	TS.	CONTAMINA	NT PRESENT:		TCE-1.2
SCREEN	ED I	NTERVAL:	20.81	- 30.81		PUMP INTAK	E DEPTH:	··-	31.60
		ASING:							
DEPTH 'I	ro wa	TER:	73	68		VOLUME FAC	TOR:		0.011 I.O
WATER I	N CA	SING (ft):	Ţ.	63		CASING VOL	(Gal/Time)	, 7.6	3 x 360 = 23.
TIME PU	MP C	N:	0	848		INITIAL FLO	OW RATE (O=	GPM):	1,7
									L./ BUCKET/ OTHER
TIME		GAL PURGED				sc		og	DTW
0853		7.7	1		22-3		-165	(	25,44
ণ্ডই		15,4	2		22.3		-140	1	27.06
6903		13.1	3	7.47	27.6	<del>`</del>	-129	(	28.97
0905				7.43	22.2		-120		
5907		-		7-41	22.1	(50)	-115		
				·		, , ,	, ,		<u> </u>
		***************************************	***			· · · · · · · · · · · · · · · · · · ·			
1ETER		SERIAL #					<u> </u>		
н :		6205	114	LIPRATED YEN/NO	S	AMPLER /EM ROJECT:	PLOYER:	silv 3MR	
:C :				YESVNO		· —			ENT: NA
iV :  20:				YES/NO				I OI KEAGE	2017.
C SAMPL	E ID	:	(	C LAB(S):		***	QC SAM	PLE TIME:	
AMPLE I	D (V	erify): <u>W</u>	-25N-Z	2/30%	<u>5</u> T	IME COLLECT	red:	0917	
	OJEC								PE OF CONTAINERS
	ЗМЕ	SF 3	BCLABS-BA	K	SJANIC	ONS	QUANTIT		Oml Polyethylene
	3MF	-	BCLABS-BA		S3MET/		1		ml Polyethylene
	3MF	_	CLABS-BA		BMETALS:	FILTER	Ō		ml Polyethylene
	3MF	_	CLABS-BA		SSWETC	HEM	2		ml Polyethylene
	3MR	P	FGUSTK		SM9221	SHO	-		arilined Belieb

No Sample for SM9221: SHO

Addal 2.5 or of il

Revision: 01/30/2009

Target Sample	Date: 12-Aug-	2009		Month:	Norm Qtr:	3 Norm Y	ear: 2009 ( W)
WELL ID:	W-25N-2	2		AREA INFO:		8300/GSA	/EGSA
DATE: 12							
PURGE METHOD/SAM	PLE METHOD:	GF / 3V	ES	CONTAMINAN	T PRESENT:		TCE-1.2
							31.60
DEPTH OF CASING:	31.	31		CASING DIA	METER:		4.50
DEPTH TO WATER:_	<u> </u>	68		VOLUME FAC	FOR:		0.826
WATER IN CASING	ft): 7.	63		CASING VOL	(Gal/Time)	: 6.3x	3c- = 18,9
							1, 1
							L./ BUCKET/ OTHER
	PURGED VOLUMES			sc			DTW
1007 14	3.3	7.31	23.0	1566		(	25,66
1013 12	.6 2	7.34	2.3.1	1545	Ч		26.1
1019 18.	9 3	7,40	736	1549	-4		26.97
(02)		7.36	23.7	1547	-13		
1023		7.33	23.5	1544	-15		
PH : ~	11005 Broshy	YES NO YES NO YES NO	F S		ERVATION/AM	3MR T of REAGE	P ENT: NA
C SAMPLE ID:		QC_LAB(S):			QC SAM	IPLE TIME:_	***************************************
AMPLE ID (VERIFY)	: W-25N-22	/ 3085	T	IME COLLECT	red:	102	1
PROJECT SMRP	/ ANALYTICAL	LAB /REQ	UESTED .	ANALYSIS/ ONS	QUANTI1	Y /TYI	PE OF CONTAINERS
*3MRP	BCLABS-BA BCLABS-BA	uk s	SOMET:	FILTER	<u>1</u>	300	omi Polyethylene Omi Polyethylene
<del>−3MRP</del> 3MRP	DCLADS DA FGLSTK		SMETE SM9221		2 .	500	ml Polyethylene erilized Polyethy

Europeal all CL

Owly Sampled for Smarre: SHO

Revision: 01/30/2009

Tar	get	Sample Date:	11-Aug-	2009		Month:	Norm Qtr: 3	Norm Y	ear: 2009
WELL II	٠:	<del></del>	W-25N-2	3		AREA INFO		£300/G8A	ear: 2009 WW
	ATE: 11-Aug-2009 LOG BOOK (DOCUM								
PURGE N	1ETH	OD/SAMPLE MET	: doh	GF / LV	TS.	CONTAMINA	NT PRESENT:	*	TCE-6.0
CREENE	D II	NTERVAL:	21.81	- 36,81	······································	PUMP INTAK	CE DEPTH:		36.50
EPTH C	F C	ASING:	38.	11		DISCHARGE	LINE:		5"
EPTH T	W O	ATER:	21.	12		VOLUME FAC	TOR:		<del>0.011</del> (.
TER I	N CA	ASING (ft):	16	.99		CASING VOL	(Gal/Time):	16.99	130=51 Cal
		)N:					OW RATE (Q=G		
ME PU	MP C	)FF:			:	MEASURED B	Y FLOW METER	/ GRAD CY:	L./ BUCKET/ OTHER
TIME	<u>Q</u>	GAL PURGED	VOLUMES	Нq	TEMP C	sc	νV	og	DTW
938		17.00	1	7.27	22.0	1447	-135		24.21
946		34,00	2	7.21	21.9	ાનુવજુ	-127	Ţ	25.02
954		51,00	3	7.30	21.9	1443	-128	(	25,4(
9956				7.76	21.7	(વ <b>ન</b> વ	-126		
956				7.21	21.7	1440	-124		
				·····					
'ER :		SERIAL # 6つら		LIPRATED YES/NO		AMPLER /EM	IPLOYER:	silv 3MRI	<b>490</b>
:				YES/NO YES/NO YES/NO	s	AMPLE PRES	ERVATION/AMT	of REAGE	NT: WA
SAMPL	E ID	):	<u> </u>	QC LAB(S)		<u></u>	QC SAMP	LE TIME:_	***************************************
PLE I	D (V	ERIFY) :( <u>a</u> )	- 2510-2	3/ 345	<u>5</u> т:	IME COLLEC	TED:	1003	
	OJEC 3MI	T / ANA	ALYTICAL	LAB /REÇ	UESTED A	ANALYSIS/	QUANTITY	/TYP	E OF CONTAINERS
	3MF	-	3CLABS-BA 3CLABS-BA		SSANIC		1		ml Polyethylene
	3MF		SCLABS-BA		S3MET/ : SMETALS		1		ml Polyethylene
			CLABS-BA		S3WETC		0 2		ml Polyethylene ml Polyethylene
	3 MF								M1 Polyethylene <del>orilized Polyethy</del> l

NO Sample for SM9221:540

adebil 25 or of CL

2.5

Revision: 01/30/2009

.....

Targ	get Sample Date	: 12-Aug-20	09		Month:	Norm Qtr:	3 Norm Ye	ear: 2009 WW		
WELL ID	);	W-25N-23	····-		AREA INFO:		8300/G8A	/EGSA		
DATE:	12-Aug-2	009 1	og book	( DOCUME	ENT CONTROL) #: AA17144					
PURGE M	ETHOD/SAMPLE ME	THOD:	GF / 3V	es	CONTAMINAN	T PRESENT:_	*	TCE-6.0		
SCREENE	D INTERVAL:	21.81 -	36.81		PUMP INTAK	E DEPTH:		36.50		
рертн о	F CASING:	38.1			CASING DIA	METER:		4.50		
								0.826		
								×300 = 420		
	MP ON:									
								L./ BUCKET/ OTHER		
TIME	Q GAL PURGED	VOLUMES	Нq	TEMP C	SC	mV	OG	DTW		
1050	(4.		7.30	23.4	1443	-48	{	23.31		
1102	28.	2	7.28	22.7	1442	-61	(	23.82		
41	યા.	3	7.21	77.5	1439	- 70	1	23.84		
1(13			7.18	22-4	1439	-63				
1115			7,12	17.4	1441	-68				
METER  pH :  SC :  mV :  H20:			PRATED YES/NO YES/NO YES/NO YES/NO	Ŧ	PROJECT:	PLOYER:	3MR	Ρ .		
QC SAMPLI	E ID:	ΩC	LAB(S)	:		QC SAM	PLE TIME:_			
SAMPLE II	D (VERIFY): /	·25N-23	13095	т	IME COLLEC	red:	1117	<u> </u>		
PRO	OJECT / AN	NALYTICAL L BCLABS-BAK		QUESTED S3ANI		QUANTIT		PE OF CONTAINERS		
		BCLABS-BAK	<del></del>	SOMET		i		mi rolyethylene		
-		BCLABS-BAK		SMETALS:	FILTER		500	ml Polyethylene		
	3MRP 3MRP	BCLABS-BAK		S3WETC				ml Polyethylene		
	JAN'E	fglstk		SM9221	: SHO	1	250 mL St	erilized Polyethy		

only Sampled Smazzi: SHO

Evacuated all cl

Revision: 01/30/2009

ATE:				······				/EGSA
URGE METHO	14-Dec-20	009						16
	DD/SAMPLE MET	CHOD:	GF / LV	K 6	CONTAMINAN	T PRESENTI_		TCE-6.0
CREENED IN	ED INTERVAL: 21.81 - 36.81				PUMP INTAKE	DEPTH:		36.50
EPTH OF CA	ASING:	38.1	11		DISCHARGE I	INE I	····	1
ерти то мл	TER:	27.	42		VOLUME FACT	OR:		0.041
ATER IN CA	SING (ft):	15,	69		CASING VOL	(Gal/Time)	ما،ا إ	x 266 = 3.2 G
								1.2 Q
IME PUMP C	OFF:	1344			MEASURED BY	FLOW METER	GRAD CY	L./ BUCKET/ OTHE
TIME Q	GAL PURGED	VOLUMES	рн	TEMP C	sc	mV	og	DTW
347	6.31	200	7.09	20.9	1498	-//7	1	22.85
TER	SERIAL	* CA	LIBRATED	4,	SAMPLER /EM	PLOYER:	<b>811</b>	va90
: :	6204		YESVNO		PROJECT: SAMPLE PRES		3CN IT of REAGI	ent: VA
/ :			YESYNO					
				1	••••	QC SAN	PLE TIME:	

Revision: 01/30/2009

Target :	Sample Date:	12-Aug-2009		Month:	Norm Qtr: 3	Norm Yea	Norm Year: 2009		
WELL ID:		W-35A-04		AREA INFO:		8300/GSA/	CGSA		
DATE:	12-Aug-20	09 LOG BO	OK (DOCUME	NT CONTROL)	#:	AA1714!	5		
PURGE METHO	DD/SAMPLE MET	HOD: GF /	3V#8	CONTAMINAN	r present:		ND		
SCREENED IN	NTERVAL:	19.30 - 29.30		PUMP INTAKI	E DEPTH:		28.00		
DEPTH OF CA	ASING:	29.30		CASING DIAM	METER:		4.50		
DEPTH TO WA	ATER:			VOLUME FACT	ror:	0	.826		
WATER IN CA	ASING (ft):			CASING VOL	(Gal/Time)	: <u></u>			
TIME PUMP (	ON:			INITIAL FLO	W RATE (Q=	GPM):	<u></u>		
TIME PUMP (	OFF:			MEASURED BY	:FLOW METER	R/ GRAD CYL	./ BUCKET/ OTHER		
TIME Q	GAL PURGED	VOLUMES PH	TEMP C	sc	mV	OG	DTW		
		,							
	<del>                                     </del>								
	<del>                                     </del>				<del></del>				
	<u> </u>								
	<u>L</u>	<u> </u>		<u> </u>	<u> </u>				
METER	SERIAL			SAMPLER /EN		silv 3MR	ra90		
			NO				ENT:		
			(S): <b>FGLS</b>	TK. BCLABS	-BAK OC SAI	MPLE TIME:			
							PE OF CONTAINERS		
PROJE	sct / A. MRP	NALYTICAL LAB BCLABS-BAK	REQUESTED S3 <b>AN</b>		1	25	Oml Polyethylene		
_	MRP	BCLABS-BAK	S3ME		1		Oml Polyethylene Oml Polyethylene		
	MRP MRP	BCLABS-BAK BCLABS-BAK		S:FILTER FCH <b>EM</b>	0 2		Oml Polyethylene		
	MRP	FGLSTK		1:SHO	1		terilized Polyethyle		
		Ropo	in requ	t work yest su	buitted	on 81	13/09		
			•						

Revision: 01/30/2009

-	Sample Date:					Norm Qtr: 4		1 1100		
DATE	17-Dec-2	009	LOG BOOK	(DOCUME)	HENT CONTROL) #: AA19038					
PURGE METH	IOD/SAMPLE ME	THOD:	Grunfos	/ 3VE6	CONTAMINAN	T PRESENT:_		מא		
SCREENED 1	(NTERVAL)	19.30	- 29.30	1	PUMP INTAKI	E DEPTH:		26.28		
DEPTH OF C	CASING:	28.	57		CASING DIAM	METER:		4.50		
DEPTH TO W	ATER:	١٦.:	79		VOLUME FAC	ror:		0.826		
WATER IN C	ASING (ft):_	14.3	18		CASING VOL	(Gal/Time):	12.2	+3cv = 36.66el		
TIME PUMP	ON:	100	2.8	;	INITIAL FLO	OW RATE (Q=0	SPM): 3.	٥		
PIME PUMP	OFF:	(1	17	1	MEASURED BY	: PLOW METER	R/ GRAD CYI	L./ BUCKET/ OTHER		
TIME Q	GAL PURGED	VOLUMES	рн	TEMP C	sc	mV _	OG	DTW		
1102	12.2	1	7.30	22.2	l	71	1	13.85		
F011	24.4	2	7.37	22-6	1678	64	1	13.88		
1111	36.6	3	7.37	22-5	1677	61	1	13.75		
1113					1679	63				
11 (5"			7.32		1680	60				
			· · · · · · · · · · · · · · · · · · ·		1000					
ETER		<i>"</i> 22		ال	******	1				
	SERIAL 620245		Librated YES/NO		ROJECT:	PLOYER:		G 3CHP		
			YES/NO	s	AMPLE PRES	ERVATION/AM	T of REAGE	INT: NA		
			1			BL QC SAM		113 <b>%</b> 1117		
PROJ	BCT / A	NALYTICAL GEL	LAB /RE	QUESTED AS:FII		QUANTIT 0		PE OF CONTAINERS		
	EMG	GEL		AS:U		2	lL Polyethylene lL Polyethylene			
	EMG	BCLABS-B		E120		1		mL Polyethylene		
	EMG	BCLABS-B. BCLABS-B.		E150 E200.7:1		1 0		250 mL Polyethylene LL Polyethylene		
	EMG	BCLABS-B		E200.		ĭ		L Polyethylene		
3	3EMG BCLABS-BAX			E300.0		1		mL Polyethylene		
		BCLABS-B	A.K	2300.0	.1103	-				
3		BCLABS-B BCLABS-B		E300.0:		ī	250	mL Polyethylene		
3 3 3	EMG EMG	BCLABS-B BCLABS-B	AK AK	E300.0:	PERC .2	6	250 40 r	mL Polyethylene mL Glass VOA vial		
3 3 3 3	eng eng eng cmp	BCLABS-B BCLABS-B BCLABS-B	ak ak ak	E300.0: E502 E60	PERC .2 1	1 6 3	250 40 r 40 r	mL Polyethylene nL Glass VOA vial nL Glass VOA vial		
3 3 3 3	eng Eng Eng Cmp Eng	BCLABS-B BCLABS-B BCLABS-B BCLABS-B	ak ak ak ak	E300.0: E502 E60 E62	PERC .2 1 5	1 6 3 3	250 40 r 40 r	mL Polyethylene mL Glass VOA vial mL Glass VOA vial LL Amber Glass		
3 3 3 3 3	emg Emg Emg CMP Emg Emg	BCLABS-B BCLABS-B BCLABS-B BCLABS-B BCLABS-B	ak ak ak ak	E300.0: E502 E60 E62 E8330:	PERC .2 1 5 :R+H	1 6 3 3 3	250 40 r 40 r	mL Polyethylene mL Glass VOA vial mL Glass VOA vial LL Amber Glass LL Amber Glass		
3 3 3 3 3 3 3	eng Eng Eng Cmp Eng	BCLABS-B BCLABS-B BCLABS-B BCLABS-B	ak ak ak ak	E300.0: E502 E60 E62 E8330: E90	:PERC .2 1 5 :R+H	1 6 3 3	250 40 r 40 r	mL Polyethylene nL Glass VOA vial nL Glass VOA vial lL Amber Glass lL Amber Glass L Polyethylene		
3 3 3 3 3 3 3	emg Emg Emg CMP Emg Emg Emg	BCLABS-B. BCLABS-B. BCLABS-B. BCLABS-B. BCLABS-B. GEL	ak ak ak ak	E300.0: E502 E60 E62 E8330:	PERC .2 1 5 R+H 0 LTER	1 6 3 3 3	250 40 r 40 r	mL Polyethylene mL Glass VOA vial mL Glass VOA vial LL Amber Glass LL Amber Glass		

Revision: 01/30/2009 2 ml Part of Sample \* ONLY Sampled Smazzhsho Evacuated all CL

Page: 1 of 2

.

Target Sample Date: 17-Dec-2009 WELL ID: K-35A-04					Month:			(11)0		
DATE:	17-Dec-20	009	LOG BOOK	( DOCUME	MENT CONTROL) #: AA19038					
PURGE MET	HOD/SAMPLE MES	PHOD :	Grunfos	/ 3VBS	CONTAMINAN	T PRESENT:		ND		
SCREENED :	INTERVAL:	19.30	- 29.30		PUMP INTAKI	DEPTH:		26.28		
DEPTH OF	CASING:	28.	37		CASING DIAM	ŒTER:		4.50		
DEPTH TO	WATER:	١٦.:	79		VOLUME FACT	OR:		0.826		
WATER IN	CASING (ft):	14.3	18		CASING VOL	(Gal/Time)	12.2	+3cu = 36.66el		
TIME PUMP	ON:	100	58		INITIAL PLO	W RATE (Q=	·GРм):3.	٥		
PIME PUMP	OFF:	(1	17.		MEASURED BY	:FLOW METE	er/ grad cy	L./ BUCKET/ OTHER		
TIME C	GAL PURGED	VOLUMES	pli	TEMP C	sc	mV	OG	DTW		
1102	12-2	\	7.30	22.2		71	1	13.85		
F011	24.4	٦.	7.37	22-6	1678	64	1	13. 88		
1111	36.6	3	7.37	22-5			ì	13.75		
1113			7.34	22.7.		63	, , , , , , , , , , , , , , , , , , , ,			
11(5			7.32	22.6	1680	60				
					(880		<u> </u>			
				-						
ETER	APR-73.	<u> </u>		L			1			
	SERIAL <i>620245</i>		Librated 	1	AMPLER /EMPROJECT:	PLOYER:	8111 3EH	G 3CNP		
V 1	ID: <b>W-35A-44</b> Y		YES/NO YES/NO YES/NO OC LAB(S)					1133		
MPLE ID	(VERIFY):	1-30×-0	<u> 4/ 3</u>	<u> </u>	IME COLLEC	TED:		1117-		
PROJ			LAB /RE		ANALYSIS/	QUANTI		PE OF CONTAINERS		
	Beng Beng	GEL GEL		AS:FII AS:U		0 2		lL Polyethylene lL Polyethylene		
	BEMG	BCLABS-BA	¥K	E120		1		mi Polyethylene		
3	BEMG	BCLABS-BA	NK.	E150	.1	1		mL Polyethylene		
	BEMG	BCLABS-BI		E200.7:1		0		L Polyethylene		
	BENG	BCLABS-BA		E200.		1		L Polyethylene		
	BENG	BCLABS+BA		E300.0		1		250 mL Polyethylene		
	BEMG BEMG	BCLABS-BA BCLABS-BA		E300.0: E502		1 6		mL Polyethylene mL Glass VOA vial		
	CMP	BCLABS-BA		E502		3		mL Glass VOA Vial		
		BCLABS-BA		E62		3		L Amber Glass		
		BCLABS-BA		E8330:		3		lL Amber Glass		
3	EMG	GEL		E90		i		L Polyethylene		
	EMG	GEL		£900:F1		0		L Polyethylene		
	EMG	GEL		E90		1		500ml GLASS		
3	BMG	FGLSTK		SM9221	:SHO	1	250 mL S1	terilized Polyethyl		
		0								

Revision: 01/30/2009 2 ml Part of Sample # ONLY Sampled Smazzhsho
Evacuated all CL

Targe	et Sample Dat	e: 16-Dec-2009		1	Month:	Norm Qtr: 4	Norm Ye	ar: 2009 WMV	
WELL ID:		M-35A-04			AREA INFOI		\$300/G5A	CGSA	
DATE:	16-Dec	-2009 LO	з воок	(DOCUME)	T CONTROL)	) #r	AA1903	7	
PURGE ME	THOD/SAMPLE	METHOD: 0	runfos	/ 3VES CONTAMINANT PRESENT			ND		
SCREENED	INTERVAL:	19.30 - 2	9.30		PUMP INTAKE	DEPTH:		26.28	
DEPTH OF	CASING:	28.57			CASING DIAM	eter:		4.50	
DEPTH TO	WATER:	13,79		\	OLUME FACT	OR:		0.826	
WATER IN	CASING (ft)	14.78			ASING VOL	(Gal/Time)	1 12.2 >	300 = 36.6 Cm	
TIME PUMP ON: 1028 INITIAL FLOW RATE (Q=GPM): 3. (									
TIME PUM	P OFF:				easured by	FLOW HETE	R/ GRAD CY	L./ BUCKET/ OTHER	
TIME	Q GAL PURG	ED VOLUMES	рН	TEMP C	sc	mV	og	DTW	
1032	12.2	1 7,	43	216	1684	69		13.86	
1036	24.9	1.	39	22-3	1679	68	(	13.88	
1340	36.6	1	.37	72.5	1678	64	1	13.93	
1042		1.	.39	22-6	1677	64			
1344			.57	22.5	1678	59			
					-				
METER	SERIA	AL# CALI	RATED			PLOYER:			
SC :	6101	<u> </u>	es/no		ROJECT: AMPLE PRES	ervation/a		O SCHP	
			es/no						
QC SAMPLE	ID: <u>H-35A-44</u>	ıx oc	LAB(S):	: BCLI	ABS-BAK, GE	L QC SAM	iPLE TIME:	/307	
SAMPLE ID	(VERIFY):_	W-35A-04/	30 £ 5	T	IME COLLEC	TED:	1049		
PRO	JECT /	ANALYTICAL LA	B /REG	QUESTED	ANALYSIS/	QUANTI	ry /TY:	PE OF CONTAINERS	
	3EMG 3EMG	GEL GEL		AS:PII		0 2		L Polyethylene L Polyethylene	
	3EHG	BCLABS-BAK		E120		ī		mL Polyethylene	
	3EMG	BCLABS-BAK		B150		1		mL Polyethylene	
	3EMG 3EMG	BCLABS-BAK BCLABS-BAK		E200.7:E		0 1		L Polyethylene	
	3EMG	BCLABS-BAK BCLABS-BAK		E300.0		1		L Polyethylene   mL Polyethylene	
	3EMG	BCLABS-BAK				î		mL Polyethylene	
	3EMG BCLABS-BAK 3EMG BCLABS-BAK			E300.0:PERC E502.2		6		mL Glass VOA vial	
	3CMP	BCLABS-BAK		E60		3		mL Glass VOA vial	
	3EMG	BCLABS-BAK		E62		3		IL Amber Glass	
	3BMG	BCLABS-BAK		E8330:		3		L Amber Glass	
	3EMG	GEL		E90		1		L Polyethylene	
	3EMG	GEL		E900:FI	LTER	0		L Polyethylene	
	3EMG	GEL		E90		1		500ml GLASS	
*	3EHO	- reborn		<del>-9119221</del>	70HO	<u> </u>		<del>berilized Polyethylon</del>	
	3	k wall samul	۸و ۵	12-17-	09 atter	CL decon	i •		
Revision:	01/30/2009	X Will sample						Page: 1 of 2	

Revision: 01/30/2009 \* Will sample on 12-17-09 after CL de Ribble 2.5 02 of CL New Pamp Makked on 12/14/69

;

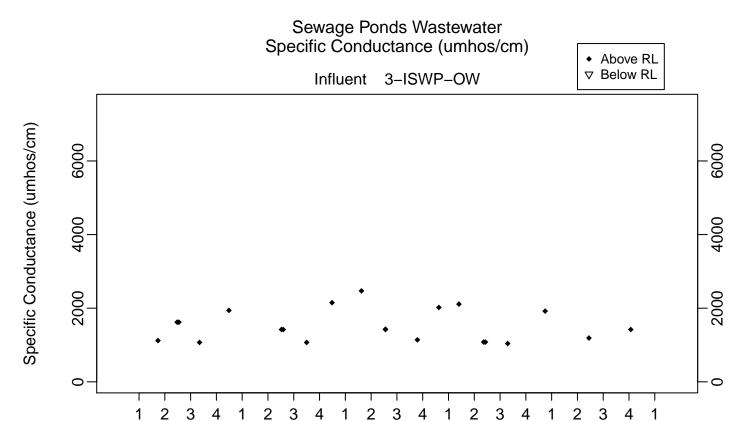
Target Sample Date:	: 16-Dec-2009	Month:	Norm Qtr: 4	Norm Year: 2	الإلار ) و٥٠٥
WELL ID:	W-35A-04	AREA INFO	1	8300/GSA/CGSA	\ w
DATE: 16-Dec-2	009 LOG BOOK	(DOCUMENT CONTROL	L) #:	AA19037	
PURGE METHOD/SAMPLE ME	THOD: Grunfos	/ 3VES CONTAMINA	NT PRESENT:	ND	
SCREENED INTERVAL:	19.30 ~ 29.30	PUMP INTAI	KE DEPTH:	26.	28
DEPTH OF CASING:	28.57	CASING DIA	Ameter:	4.50	.,
DEPTH TO WATER:	13.79	VOLUME FAC	etor:	0.826	
WATER IN CASING (ft):_	14,78	CASING VO	L (Gal/Time):	12.7 23,0	፣ ሂ. ሬ
TIME PUMP ON:	1028	INITIAL FI	LOW RATE (Q=GI	PM): 3.1 Q	
TIME PUMP OFF:	1049	MEASURED I	BY: PLOW METER.	GRAD CYL./ B	JCKET/ OTHER
TIME Q GAL PURGED	VOLUMES PH	TEMP C SC	ηΝV	OG	DTW
**************************************					
meter serial	# CALIBRATED	Sampler /E	EMPLOYER:	silva90	
рн: <u>67</u> sc:	OLUSY WESTNO	PROJECT: _ SAMPLE PRE	SERVATION/AND	3EMG Of REAGENT:	NΑ
mV :	Xes/no				
QC SAMPLE ID:N-35A-44Y		); PGLSTX, BCLARS	-BAK QC SAME	LE TIME:	1307
SAMPLE ID (VERIFY): C	- 1				
	ANALYTICAL LAB /RE BCLABS-BAK	EQUESTED ANALYSIS	OUANTITY	/ TYPE OF	

Page: 2 of 2

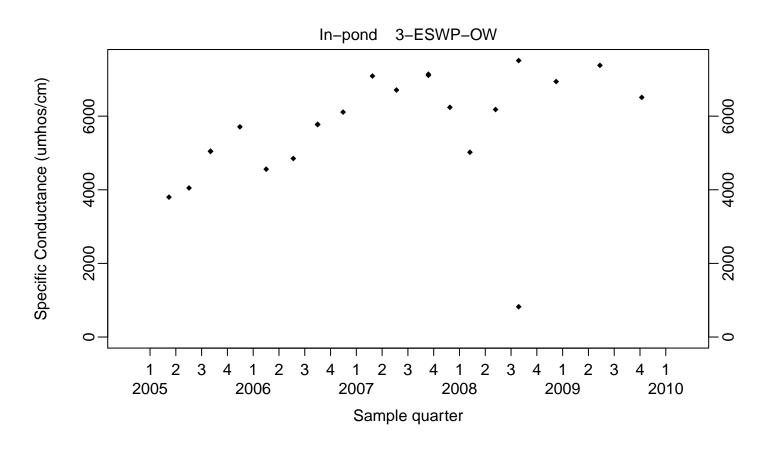
Revision: 01/30/2009

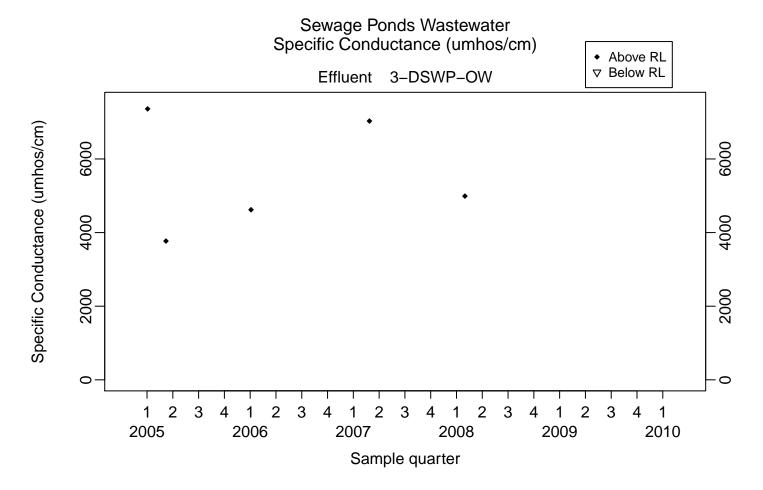
## 5-Year Historical Data Plots

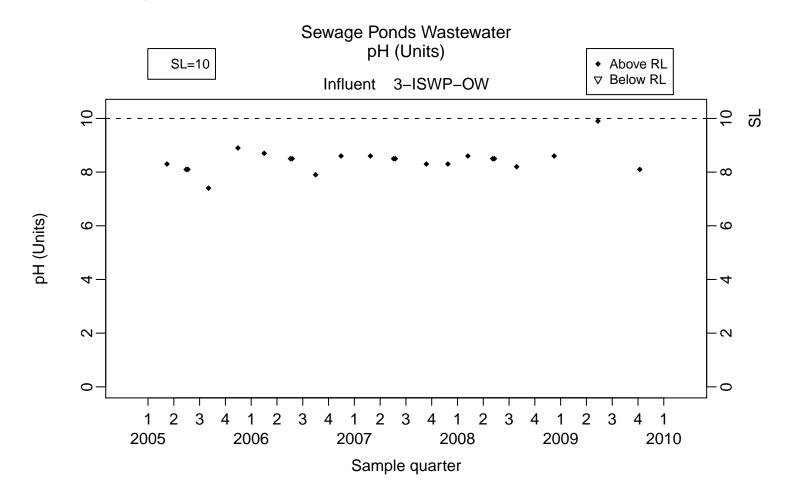
# ISWP and ESWP Network Sewer Pond Groundwater Network

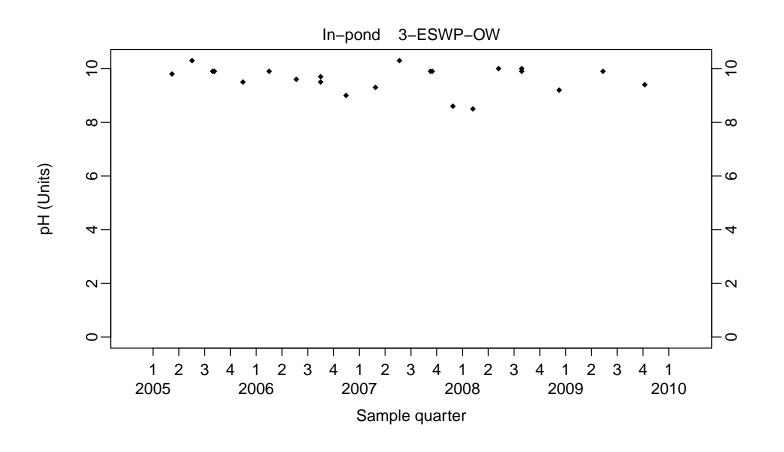
Abbreviation Key: LL = lower limit SL = statistical limit PL = predicative limit RL = reporting limit 

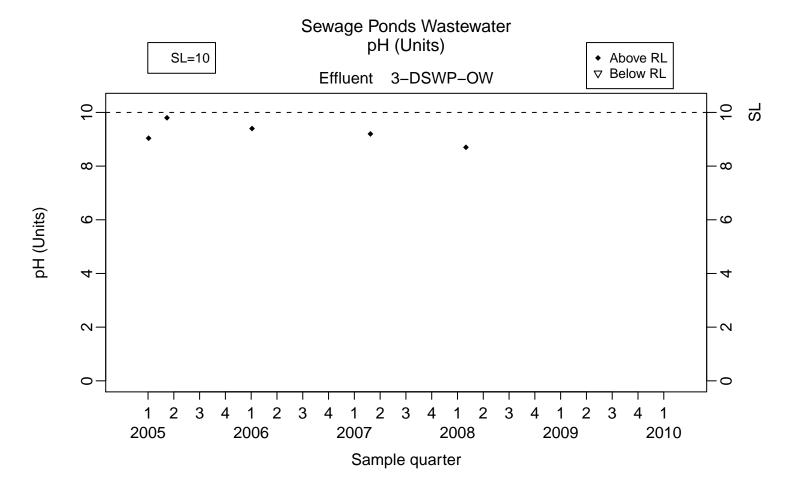
Sample quarter

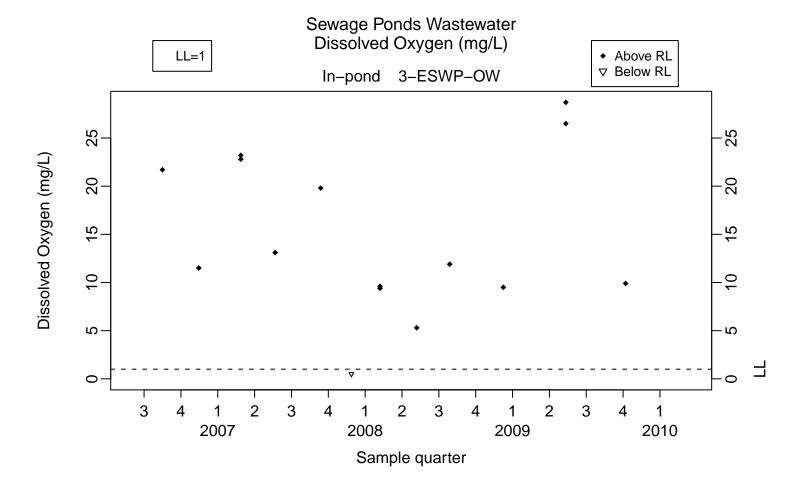


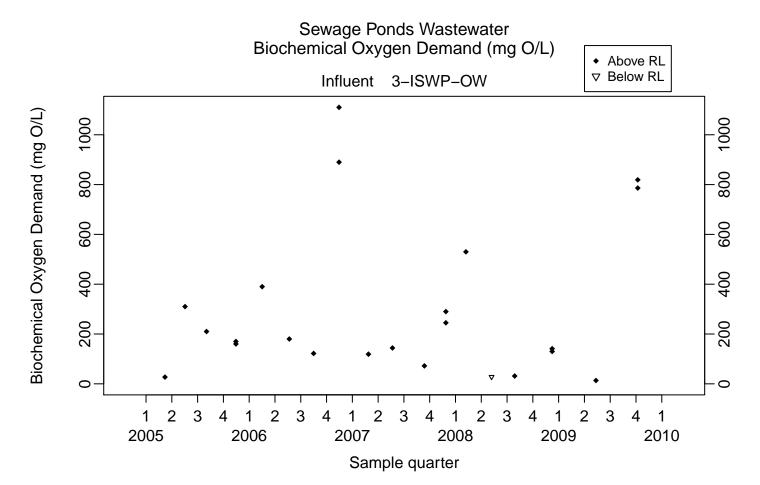


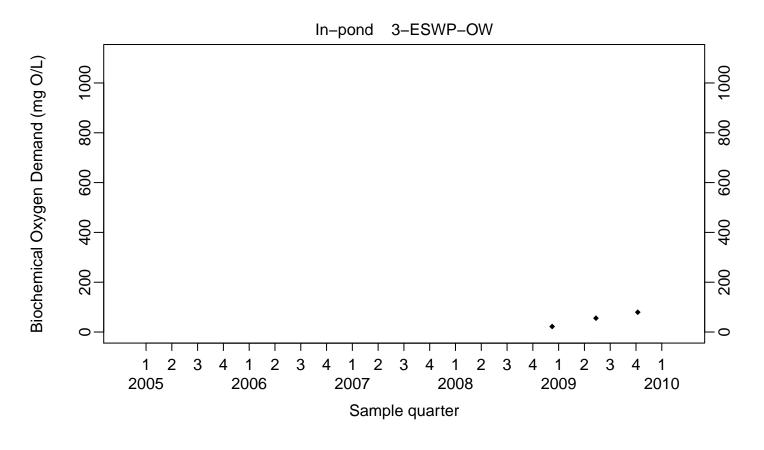


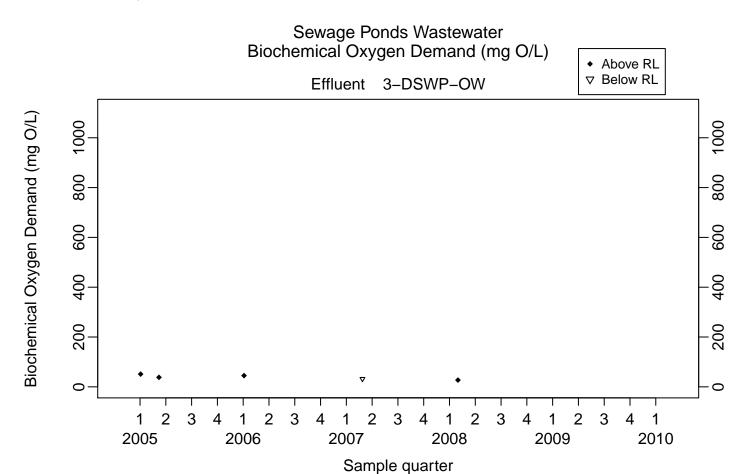


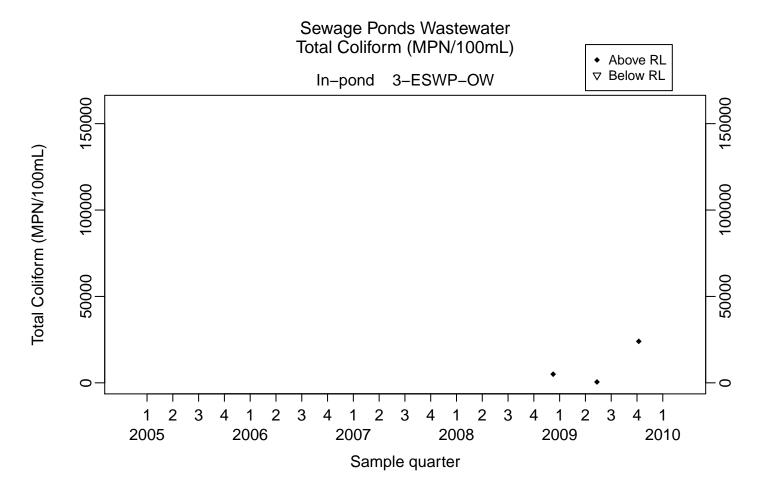


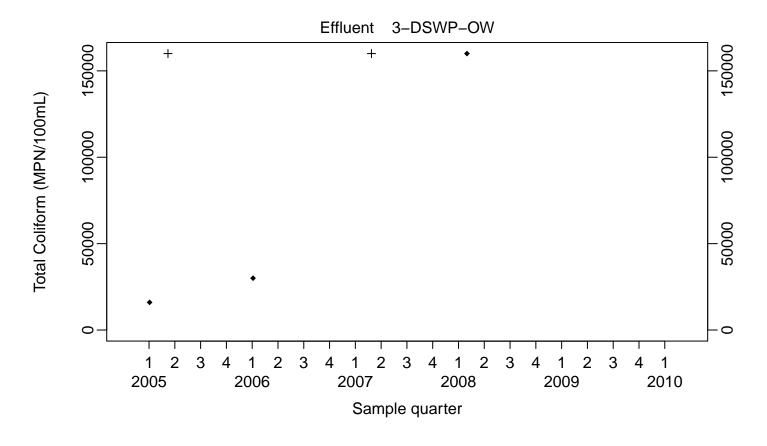


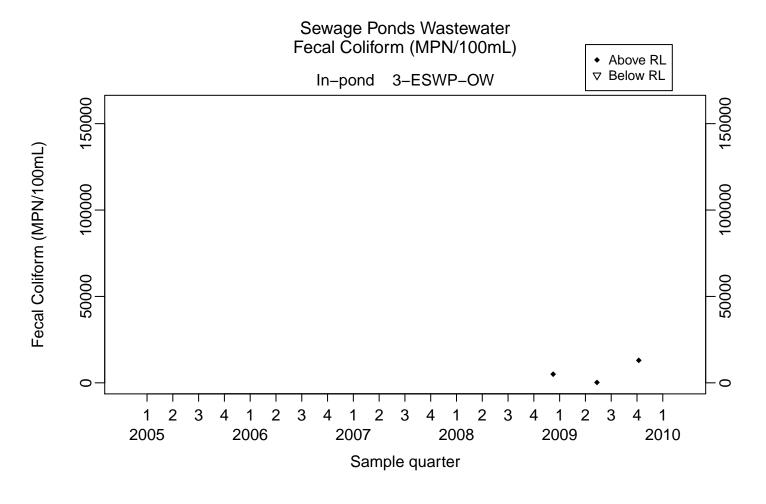


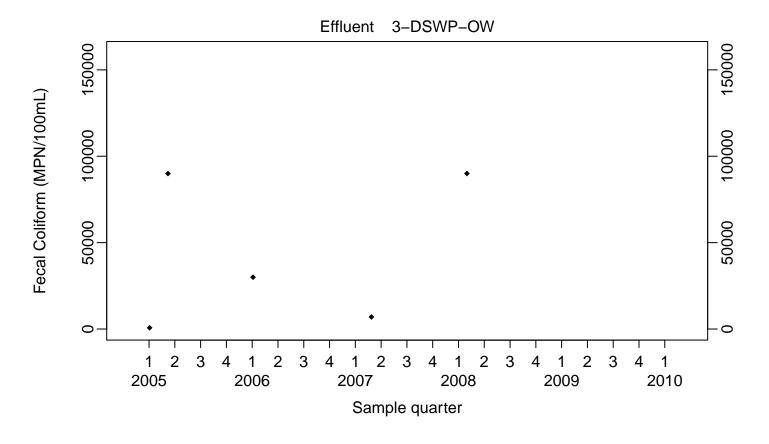


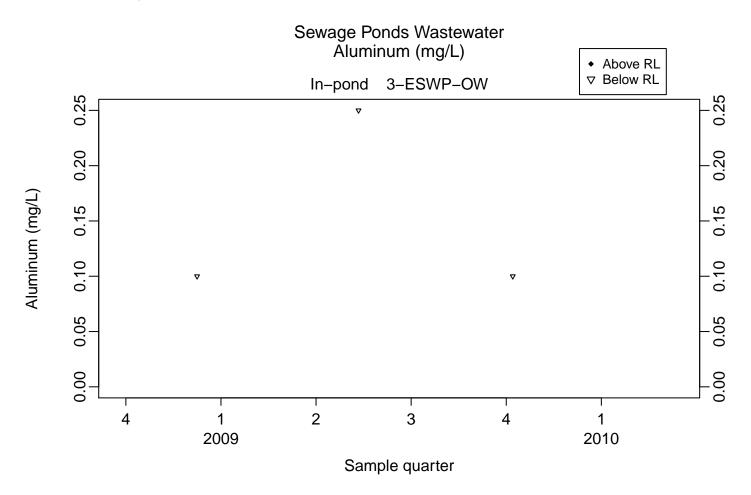


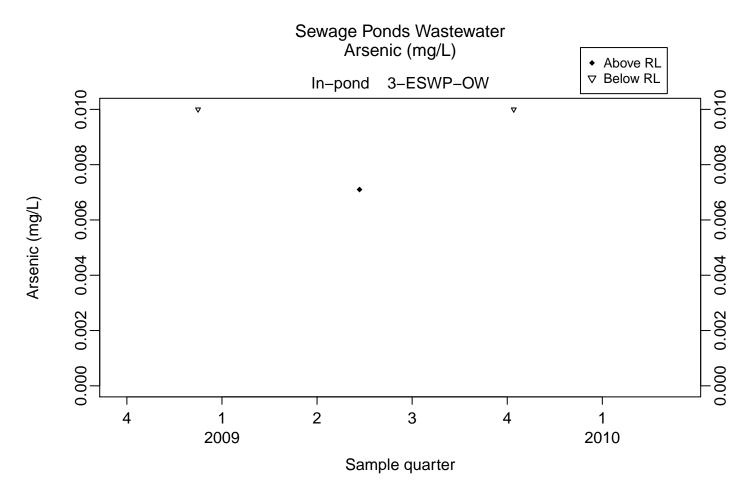


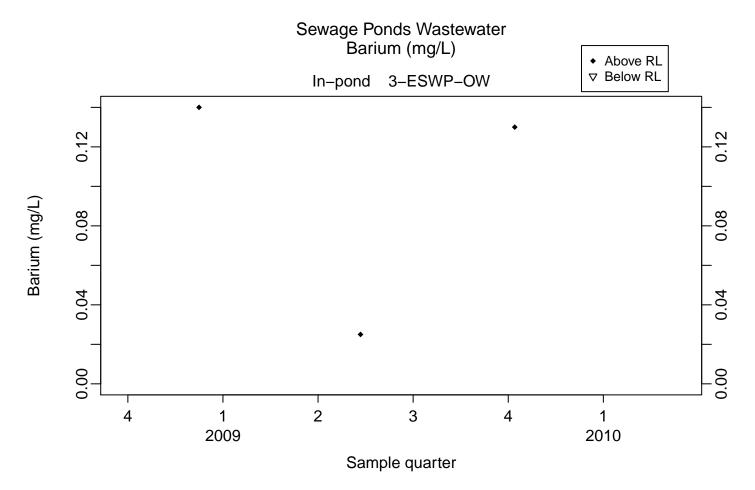


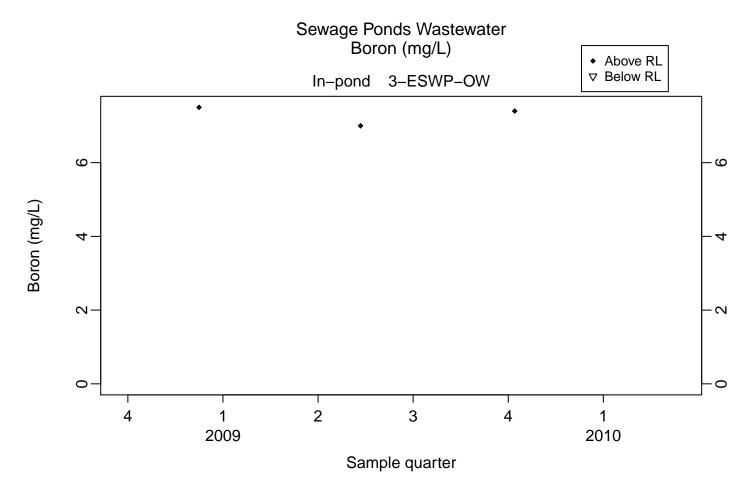


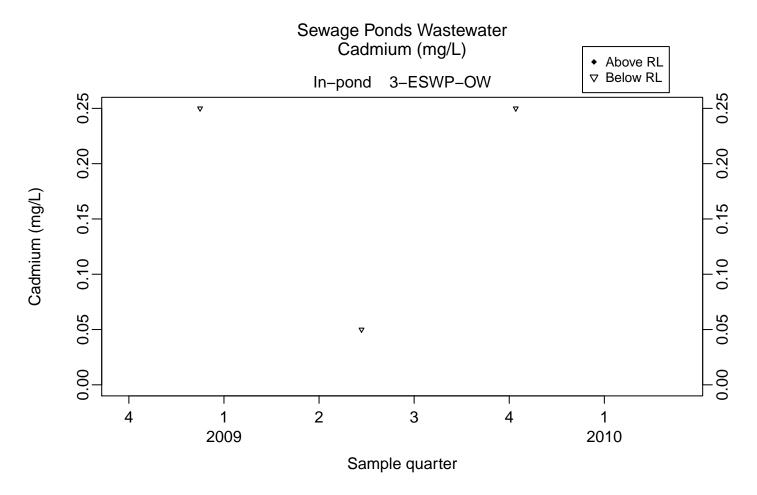


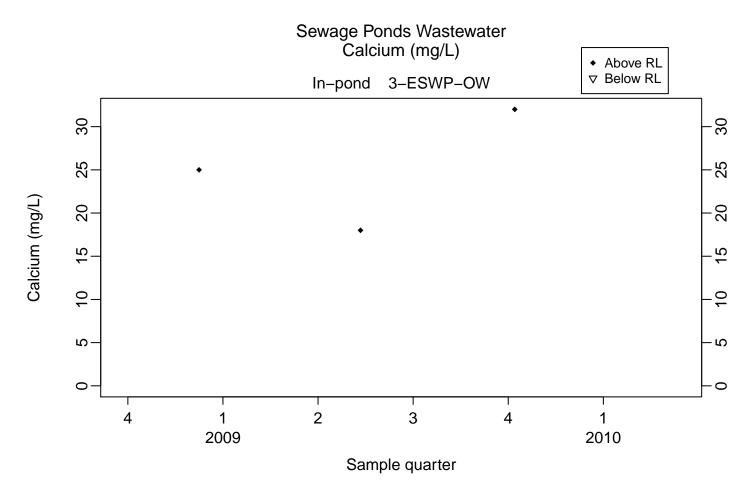


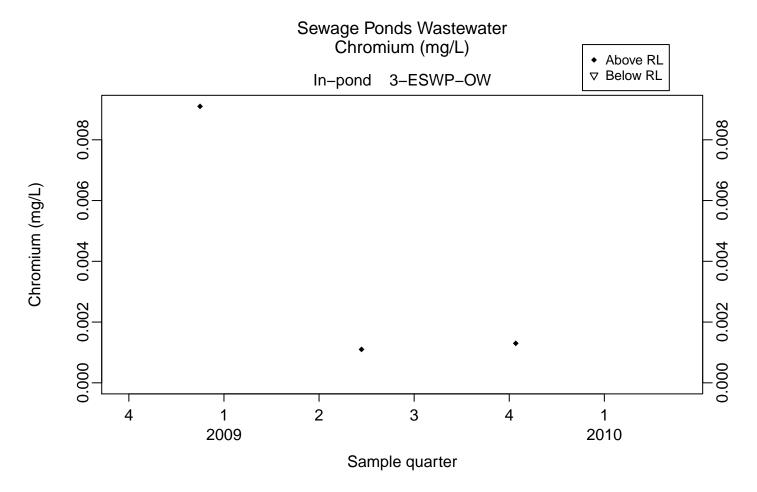


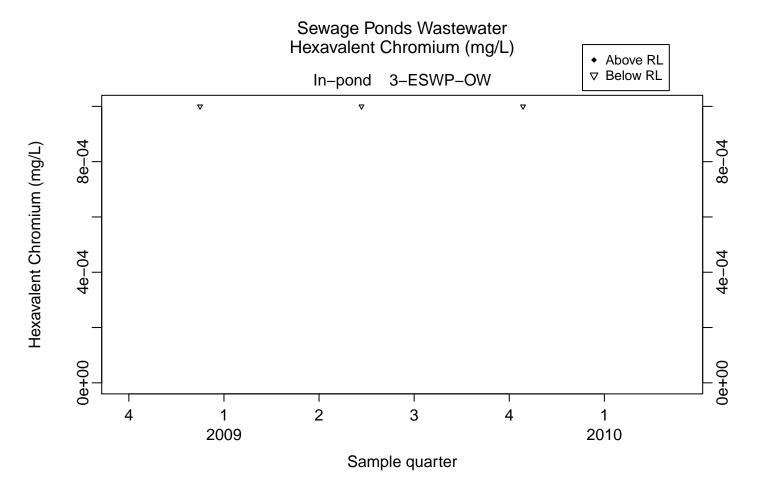


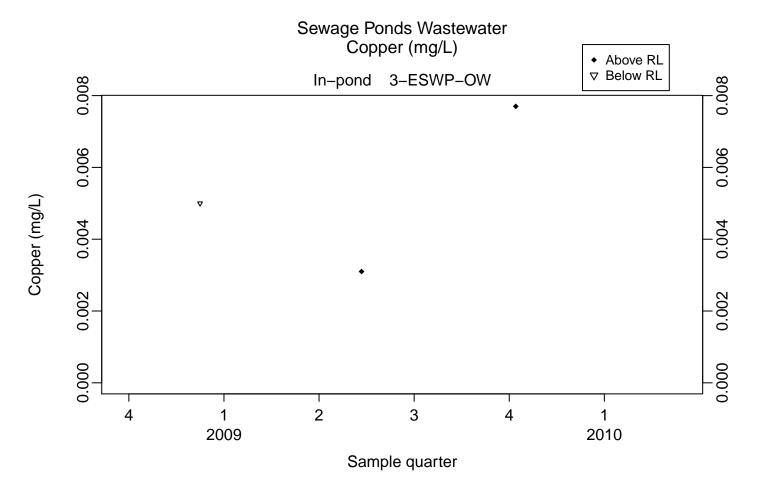


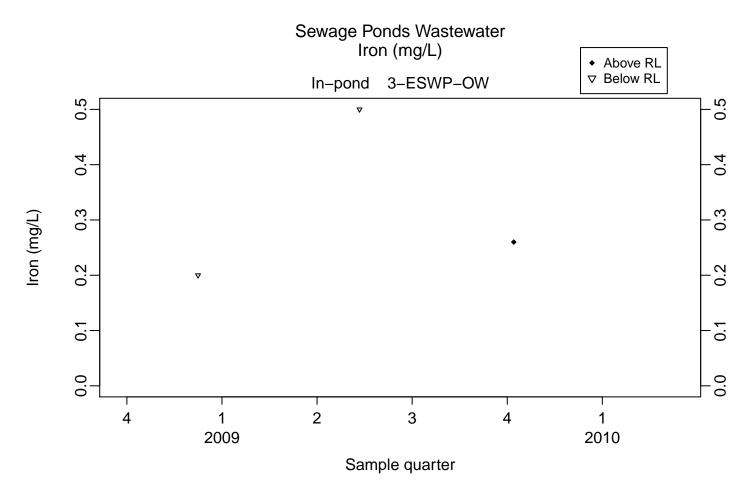


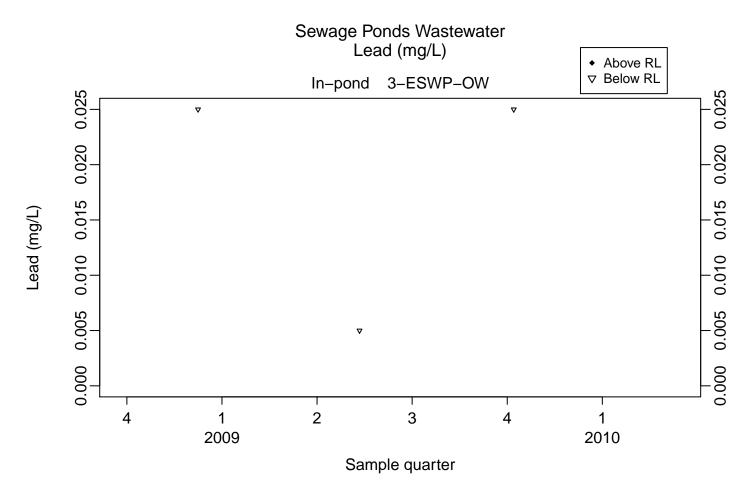


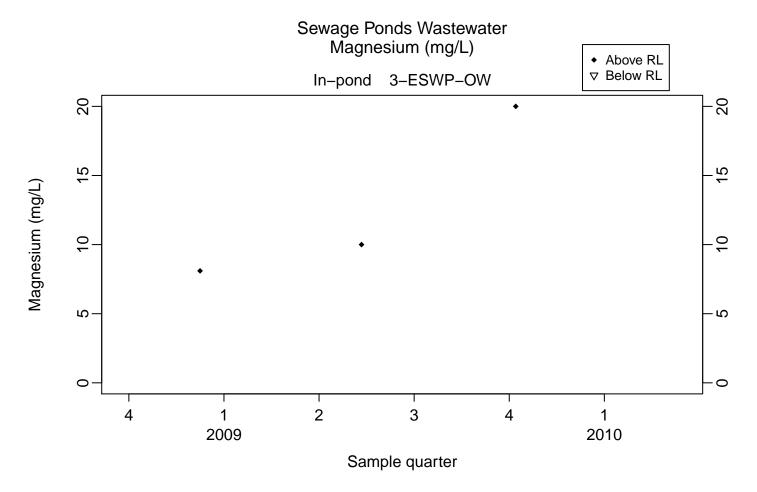


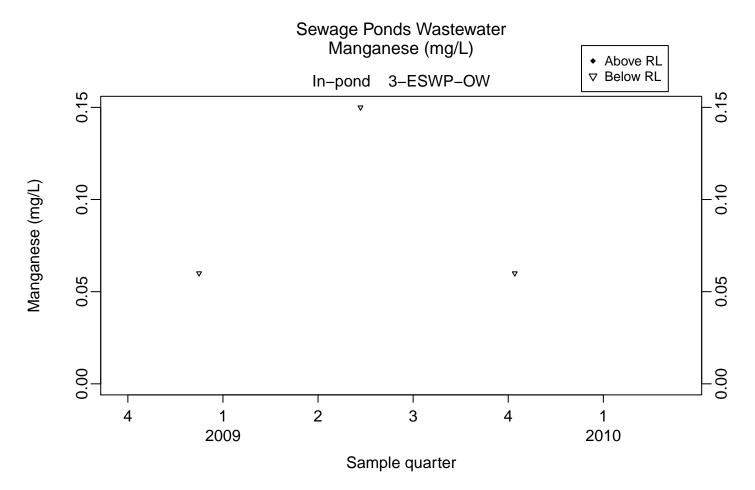


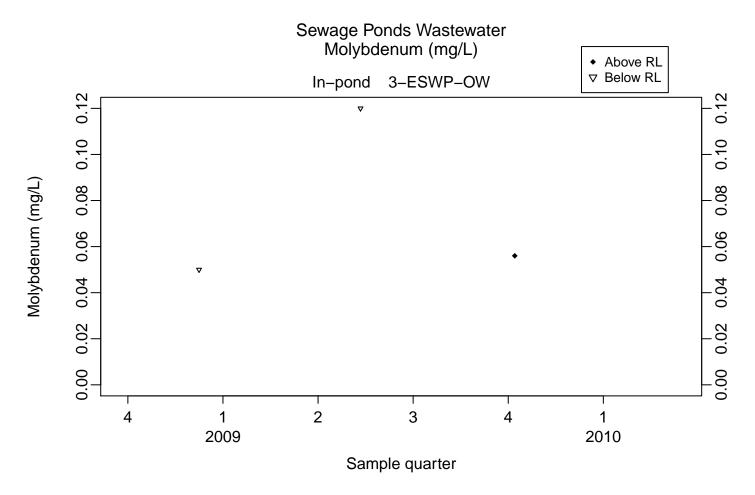


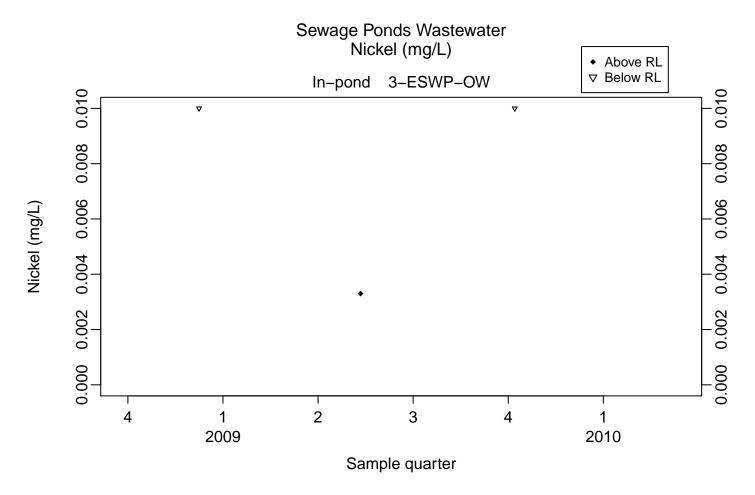


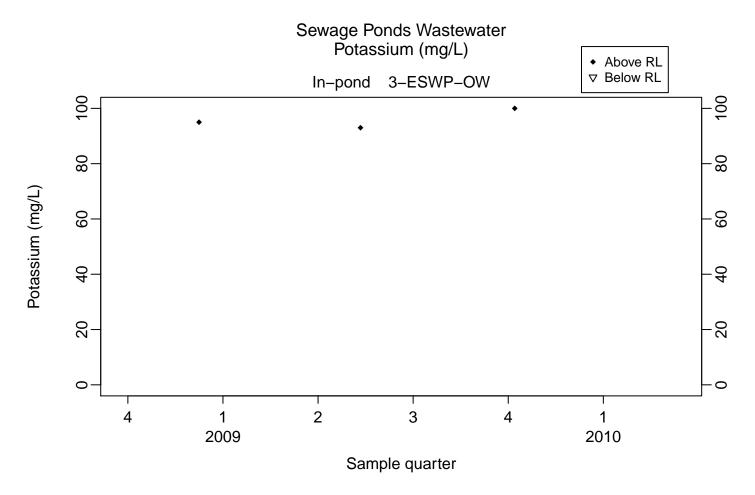


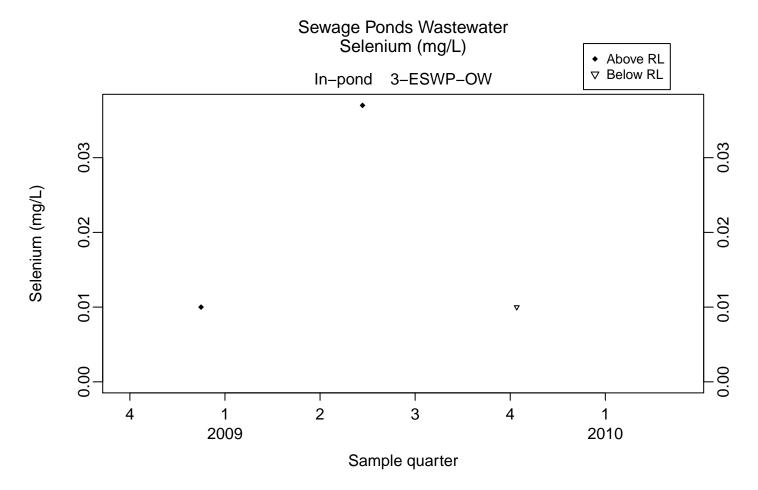


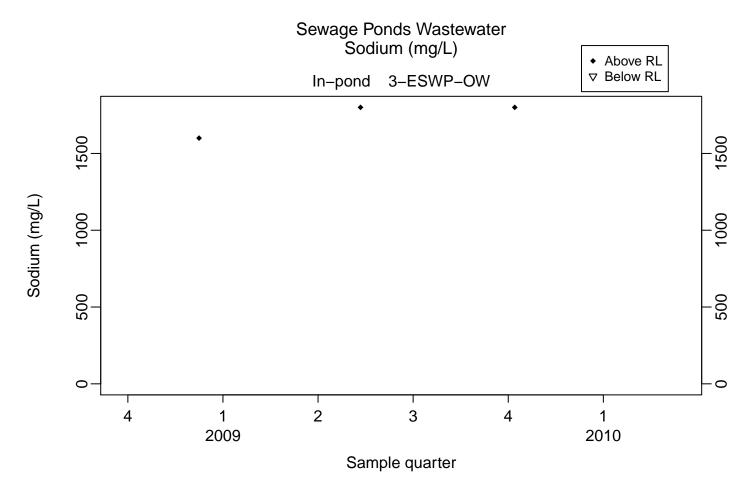


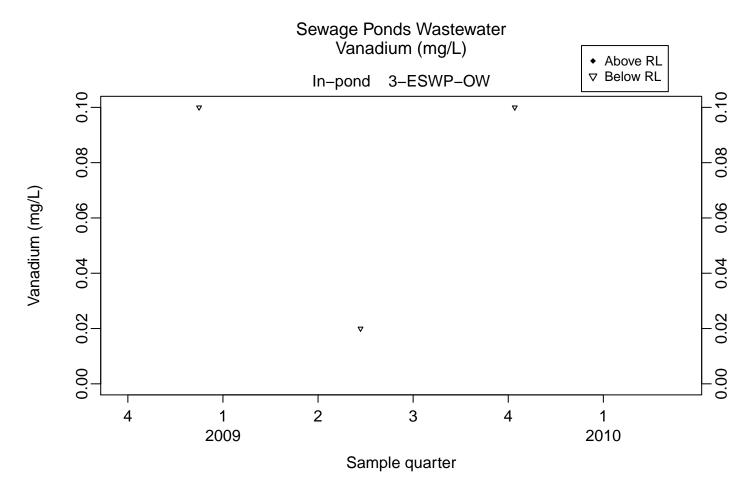


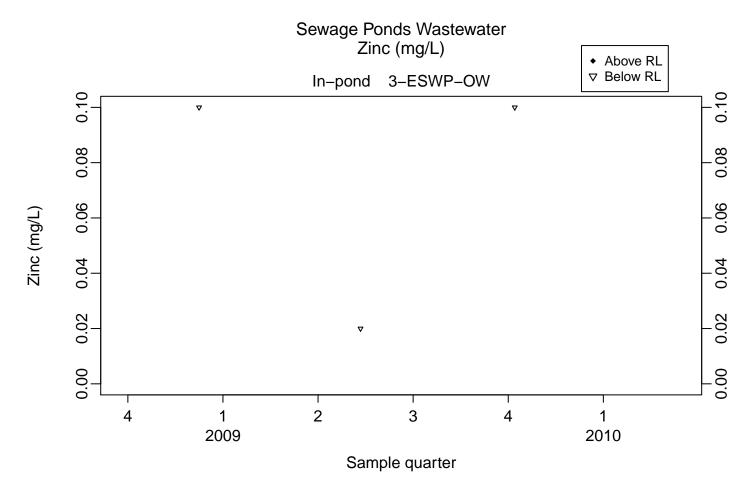






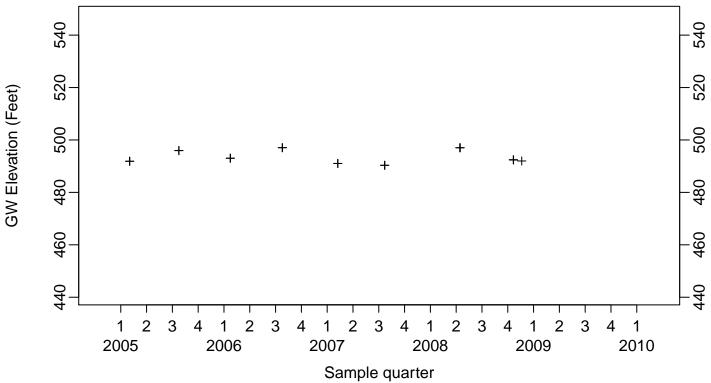


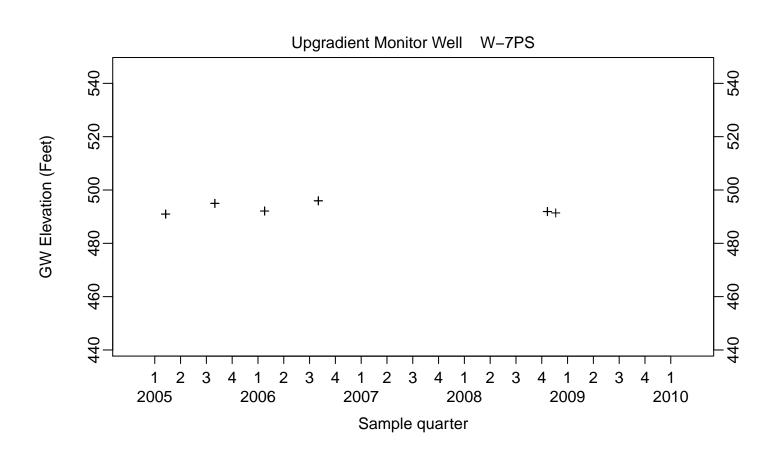




### Sewage Ponds Ground Water GW Elevation (Feet)

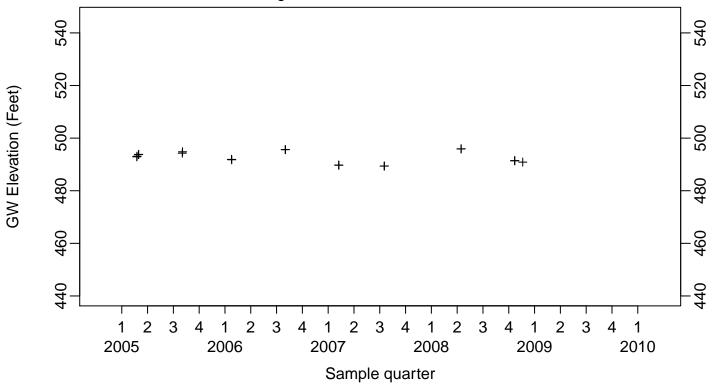


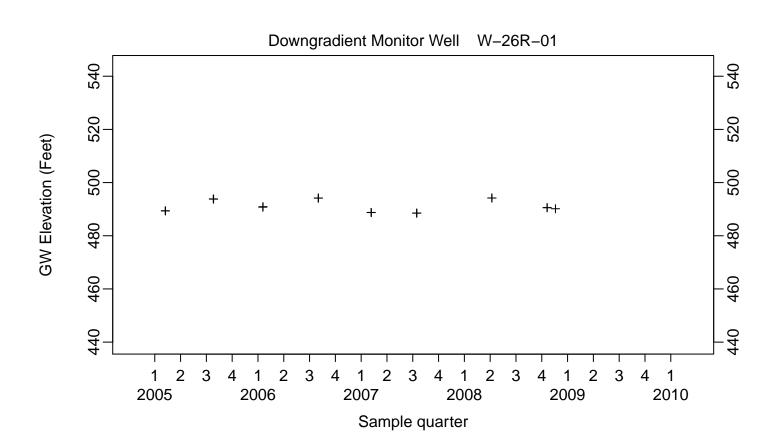




# Sewage Ponds Ground Water GW Elevation (Feet)

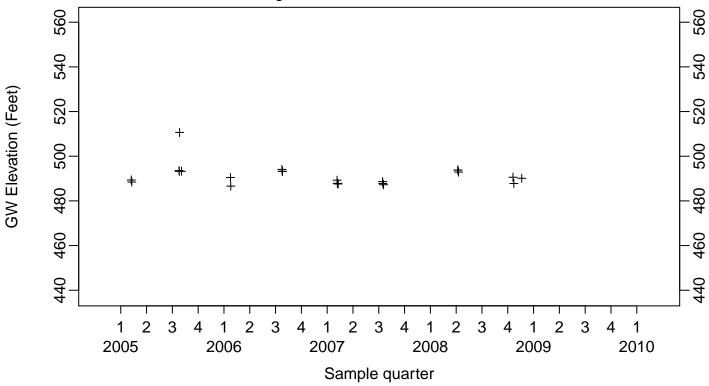


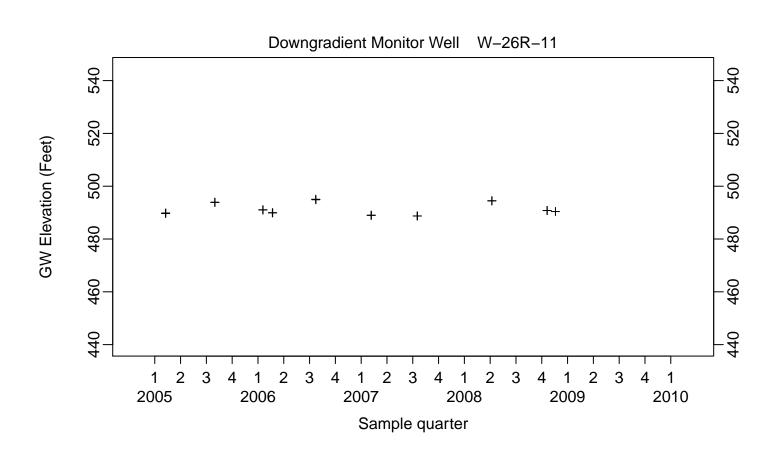




#### Sewage Ponds Ground Water GW Elevation (Feet)

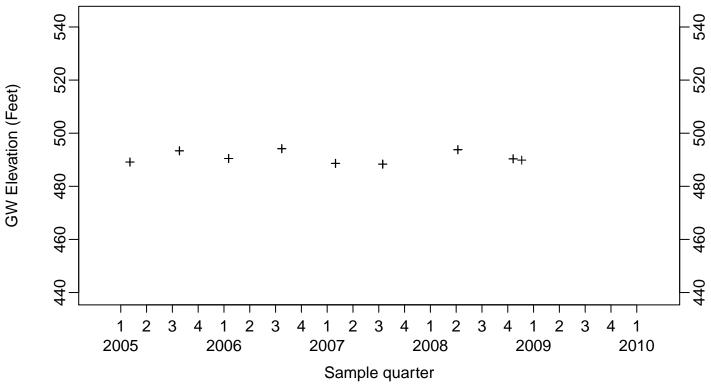


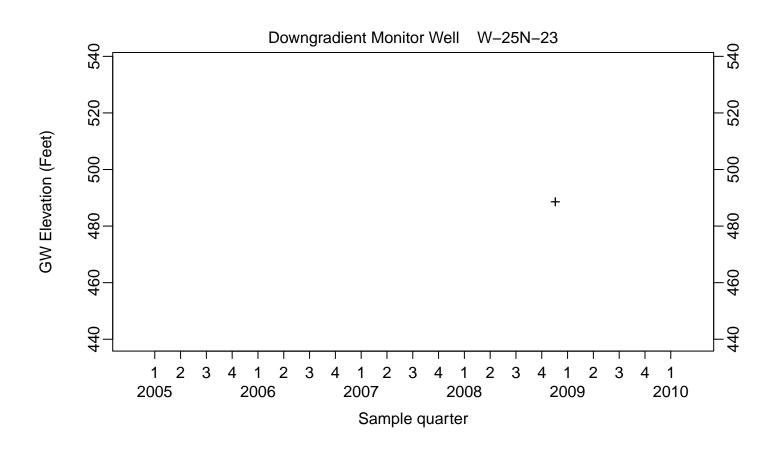




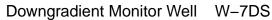
# Sewage Ponds Ground Water GW Elevation (Feet)

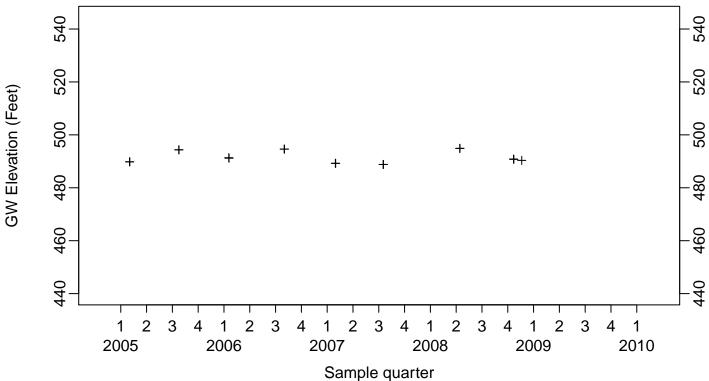


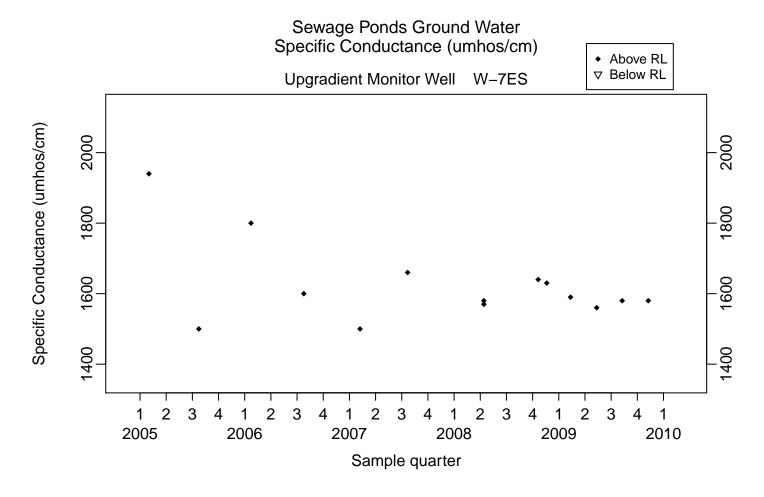


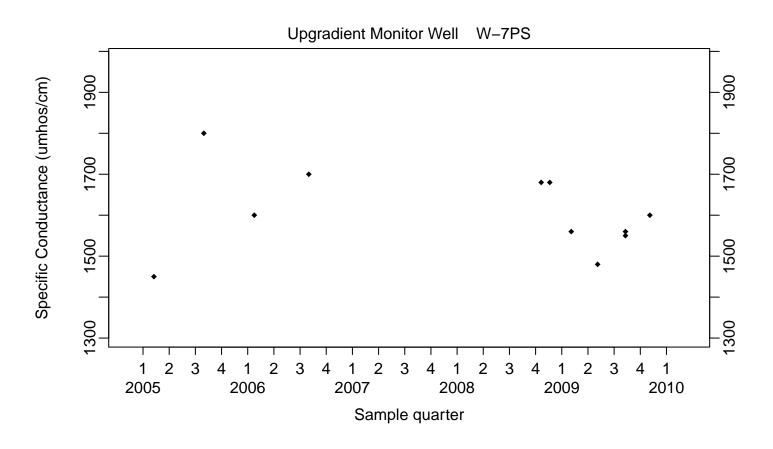


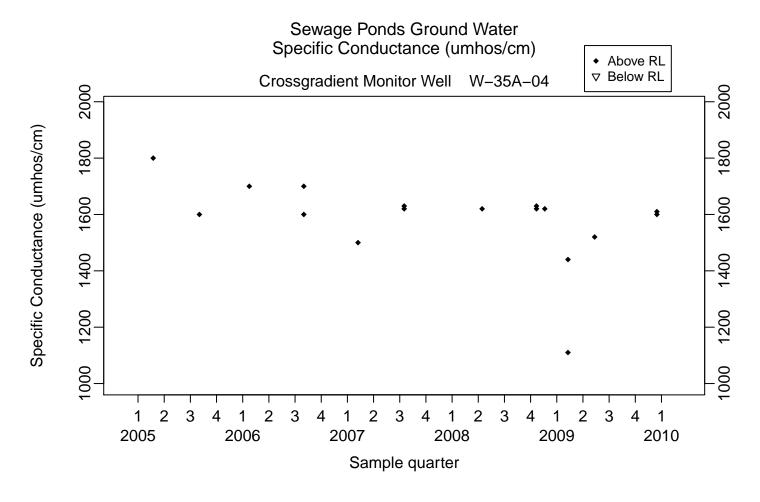
### Sewage Ponds Ground Water GW Elevation (Feet)

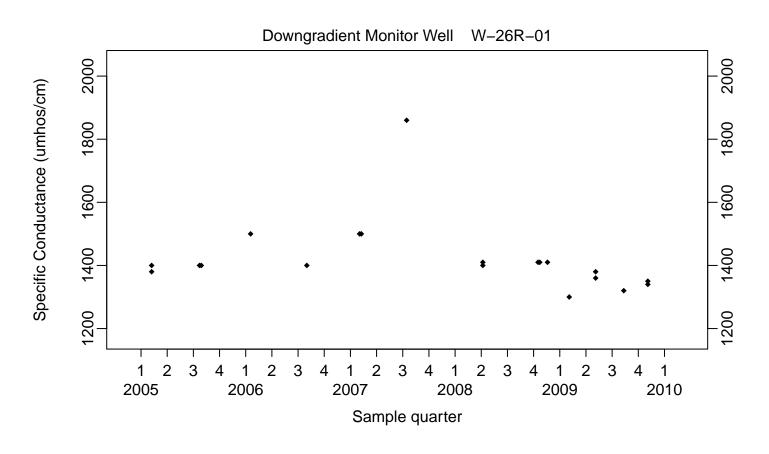


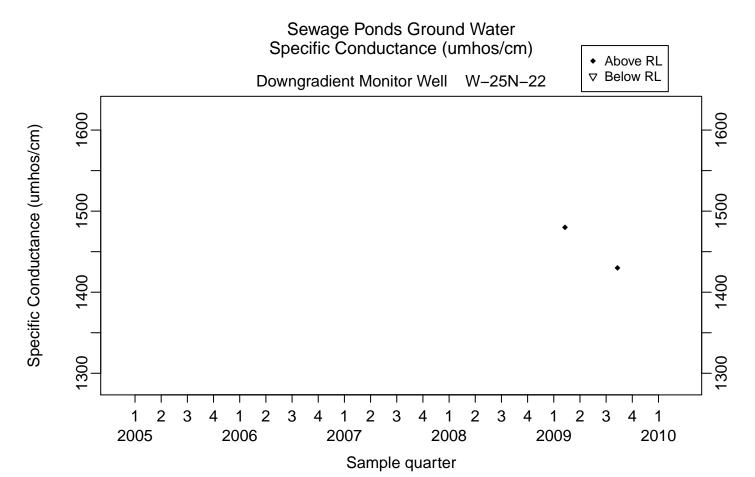


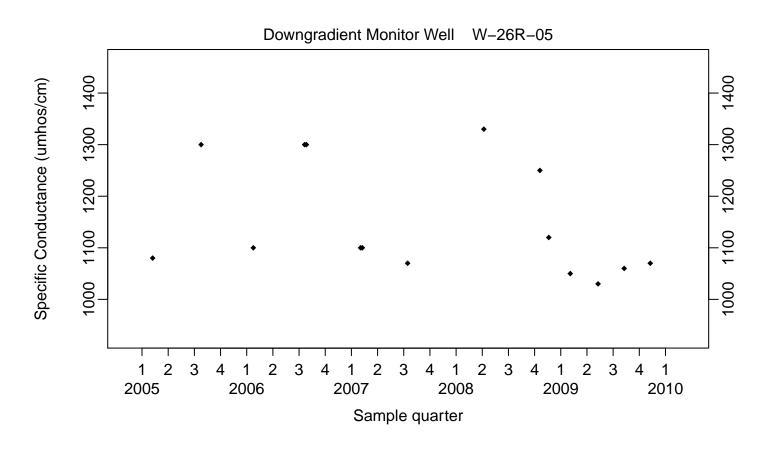


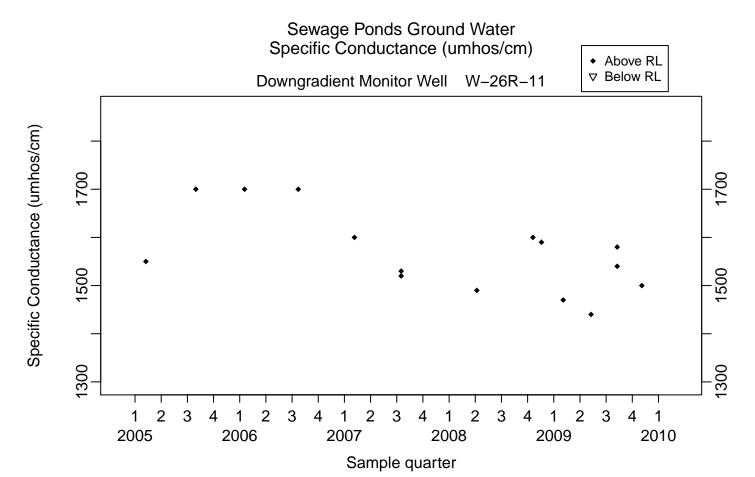


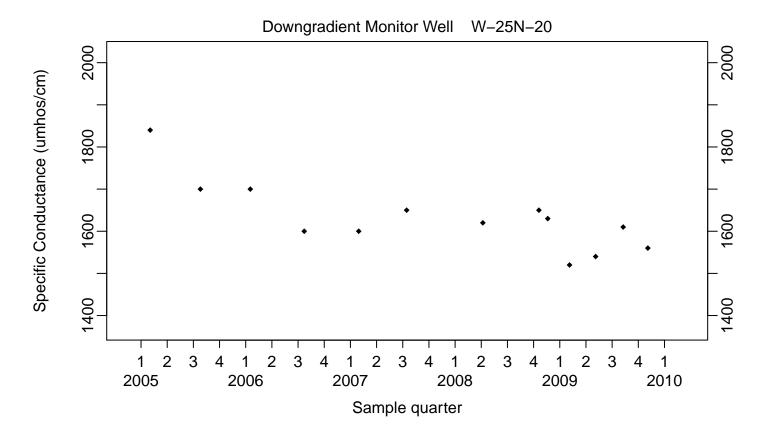


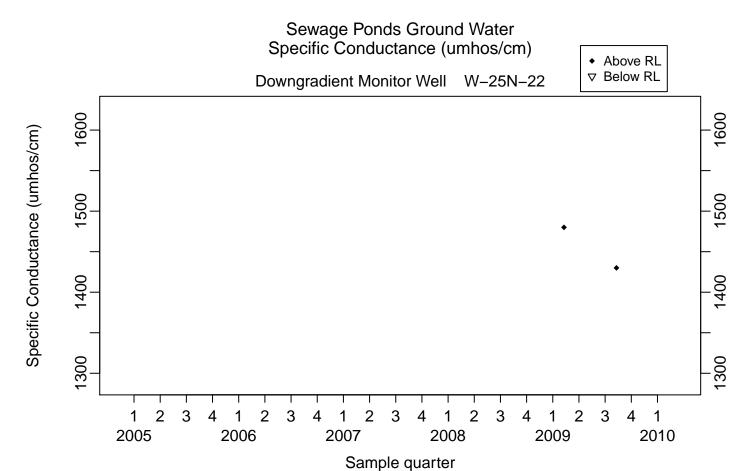


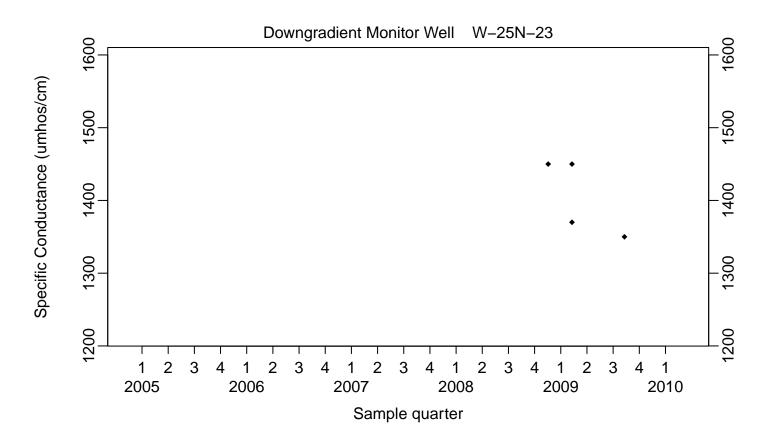


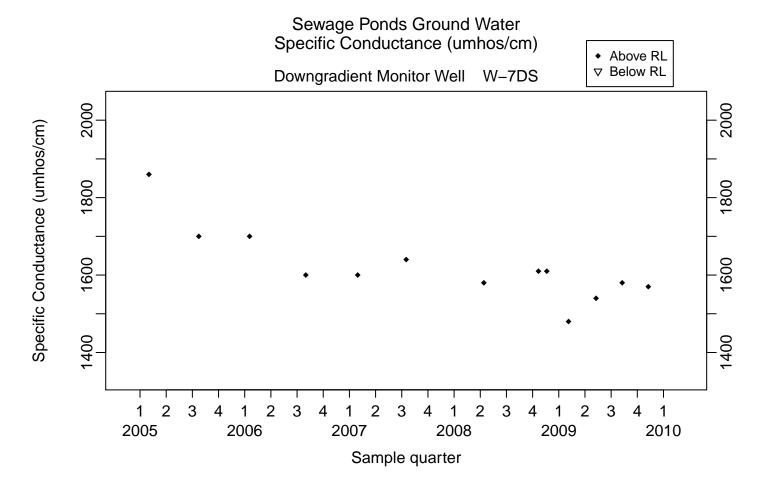


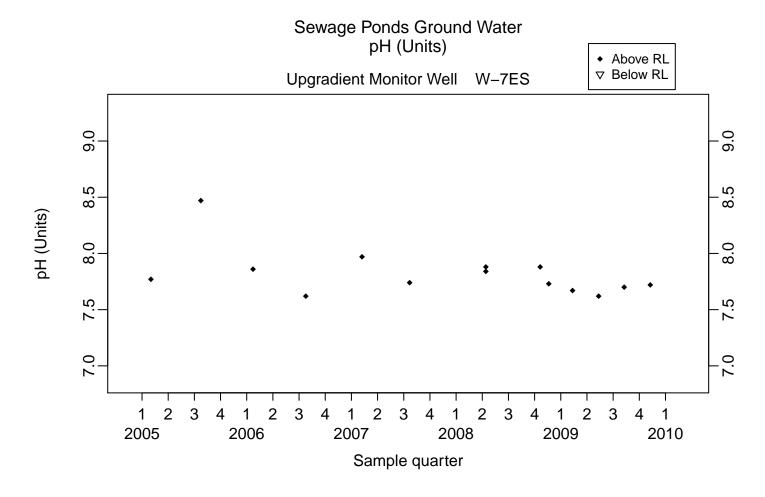


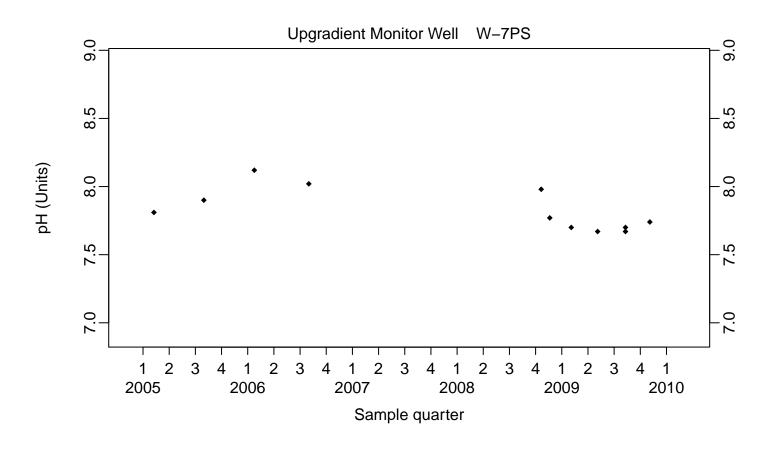


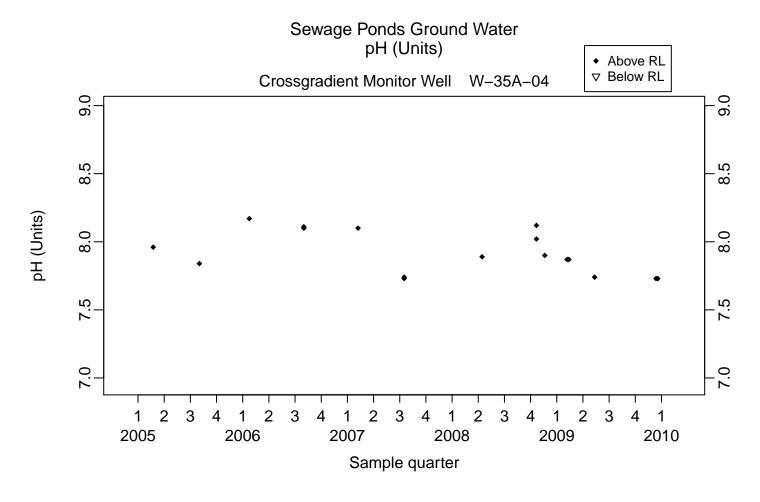


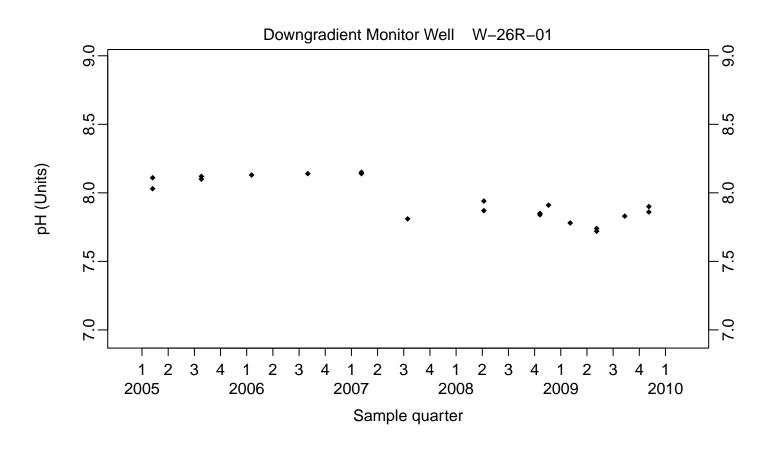


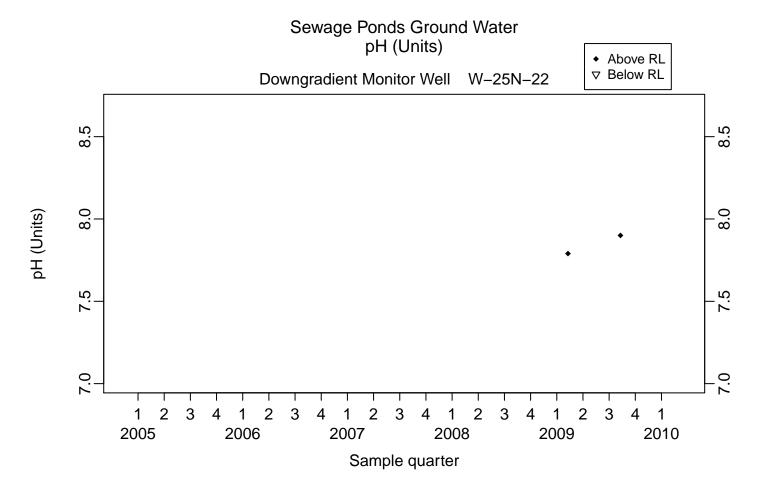


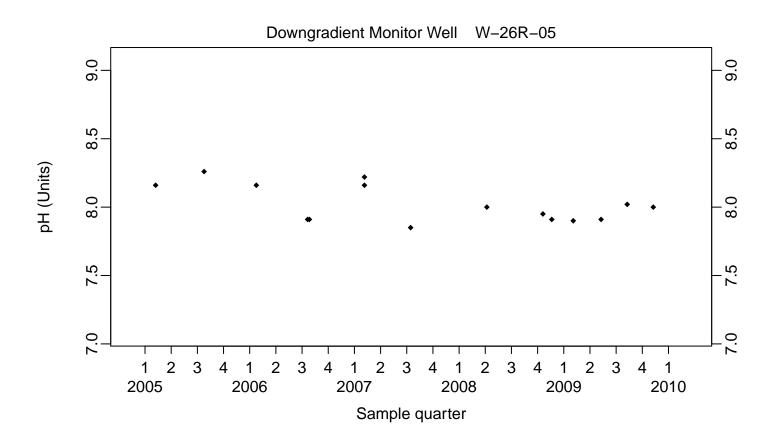


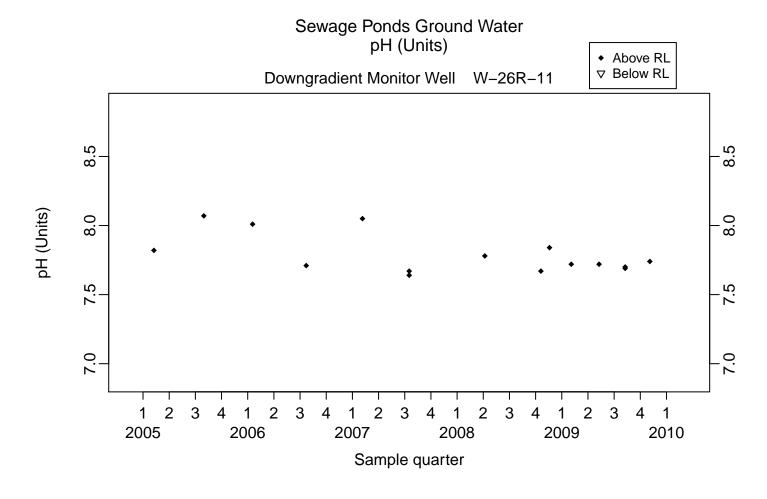


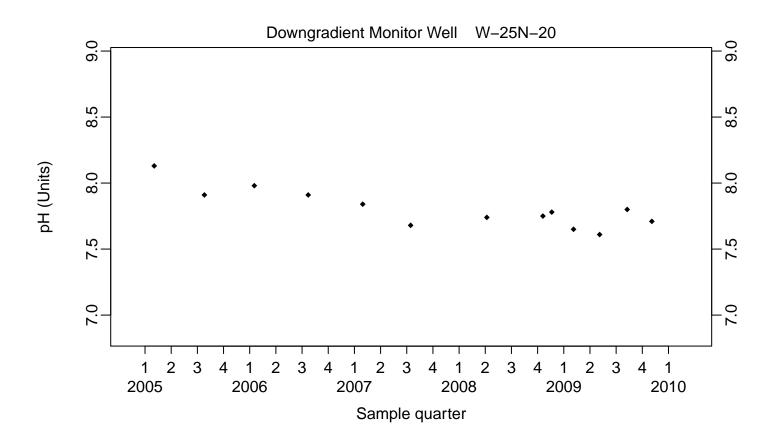


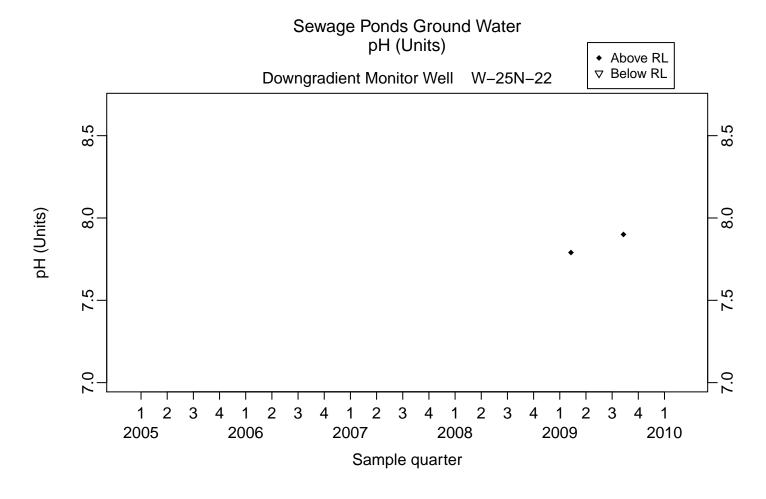


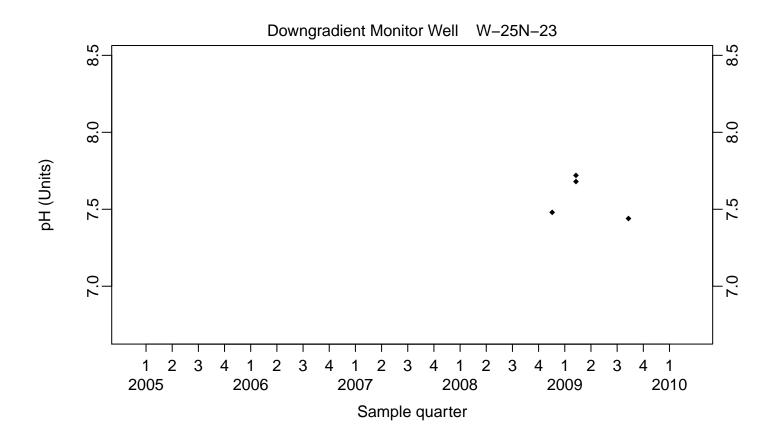


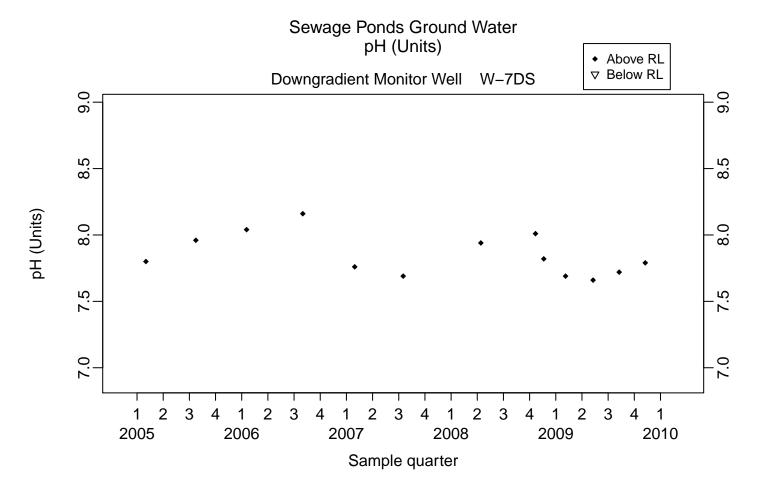


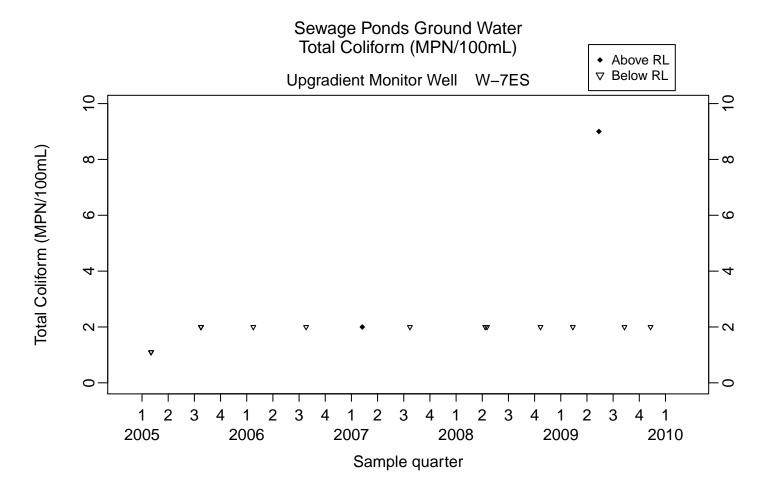


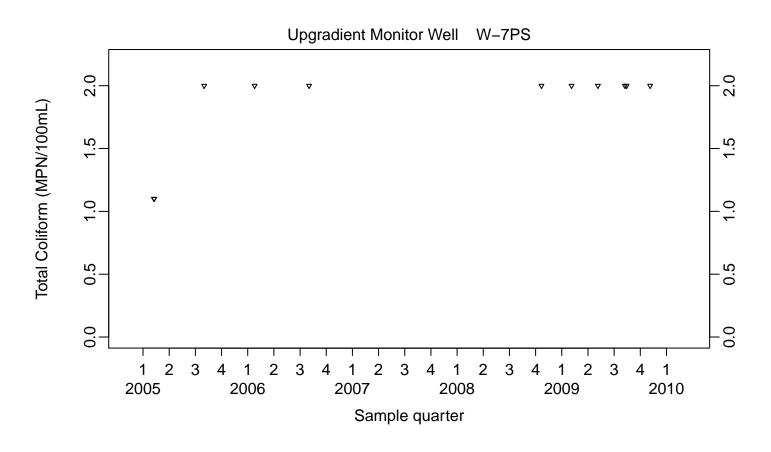


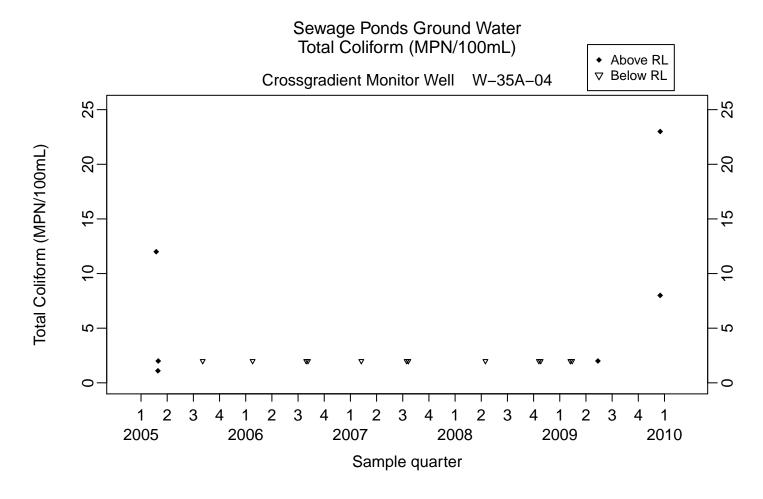


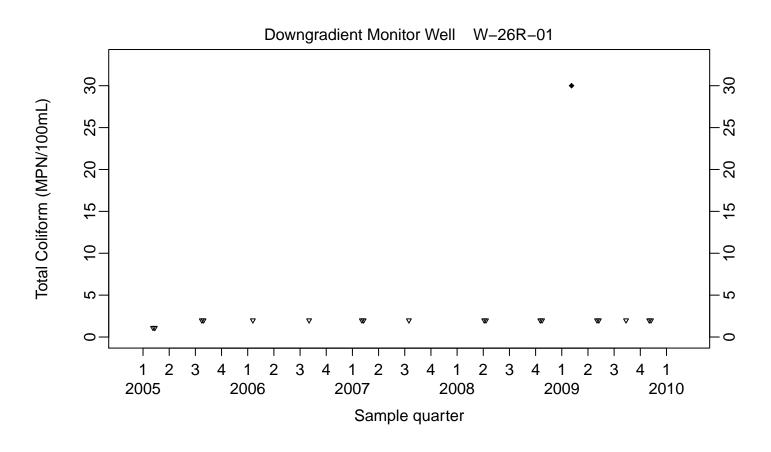


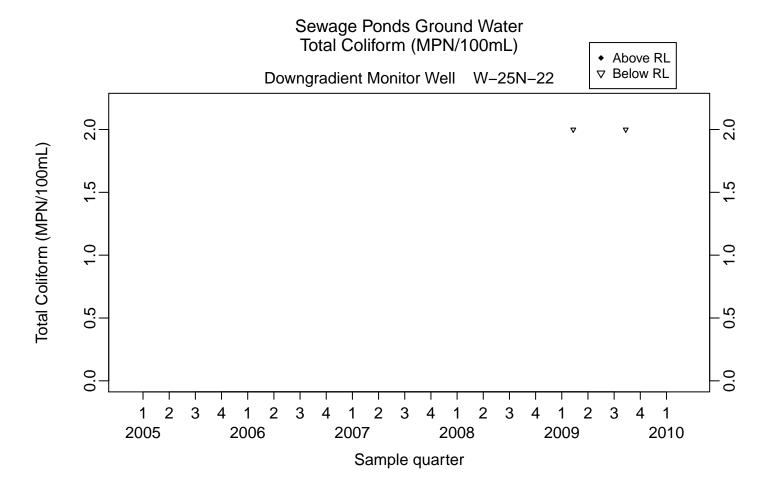


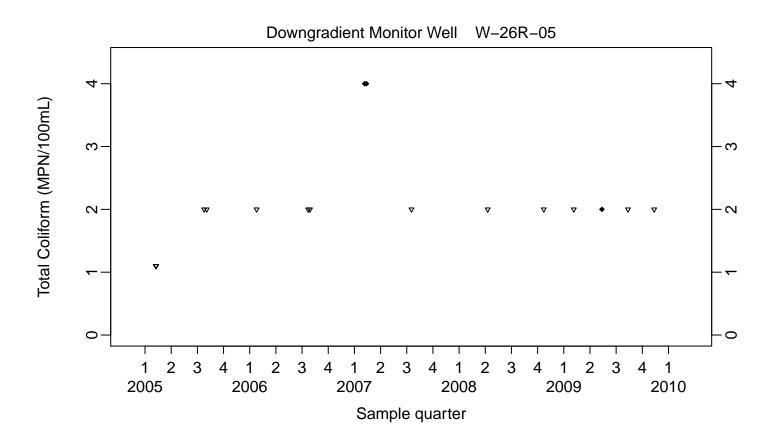


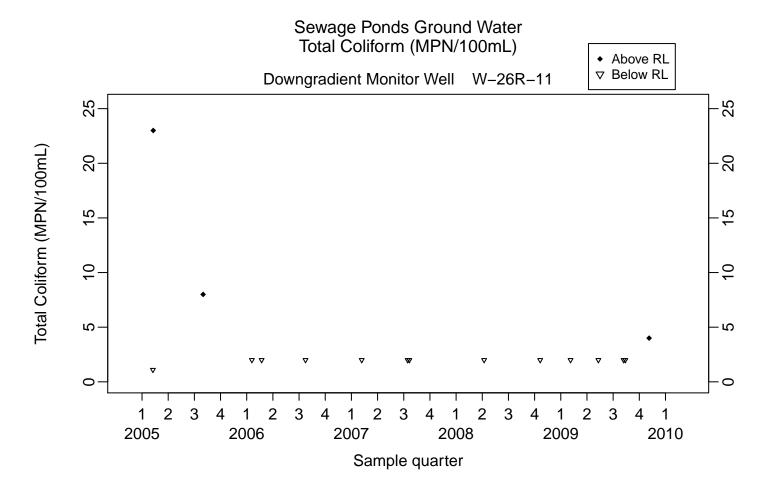


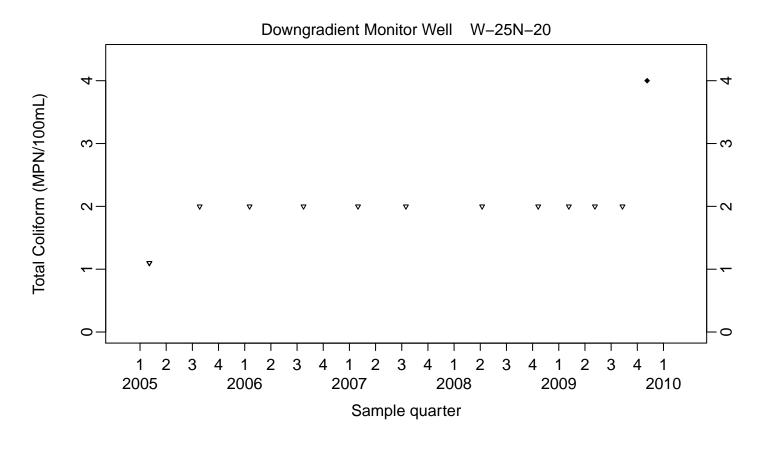


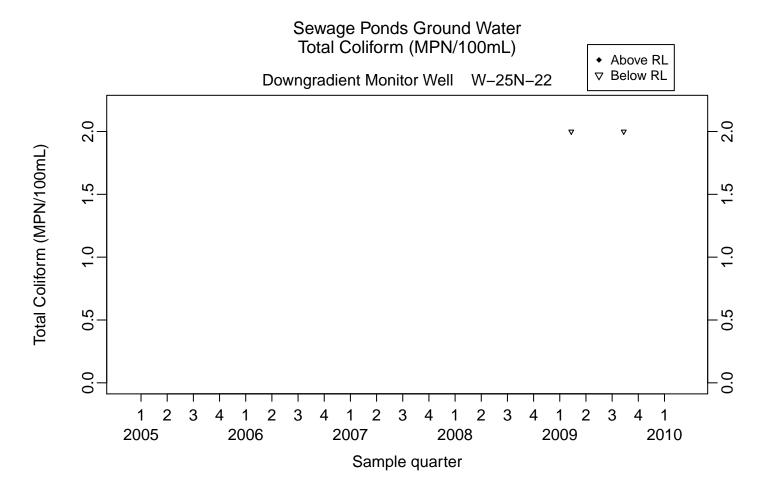


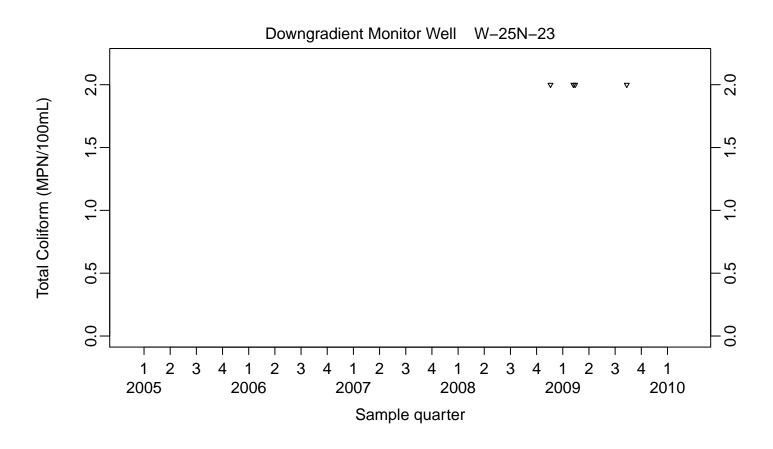


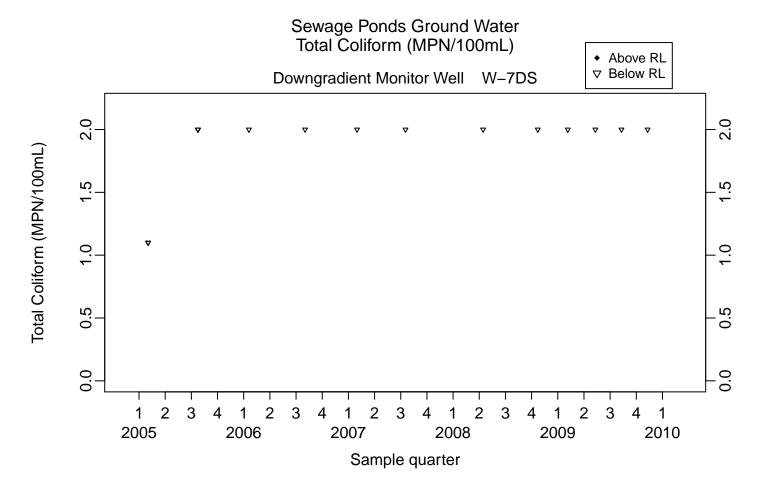


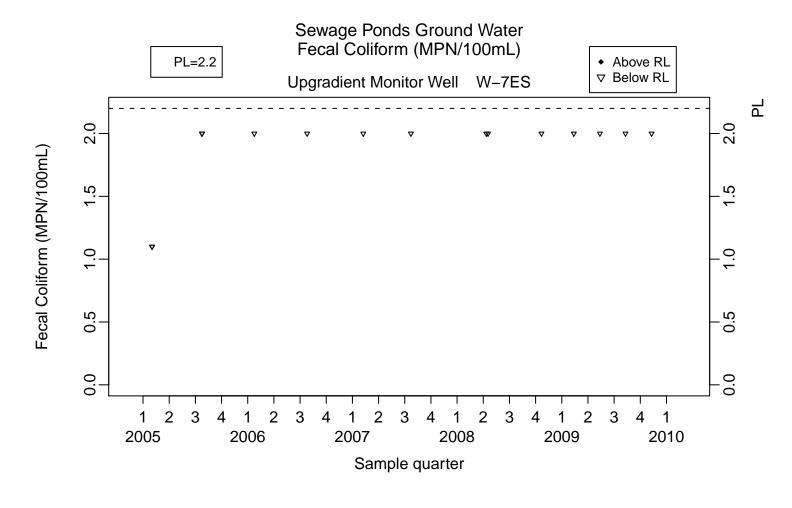


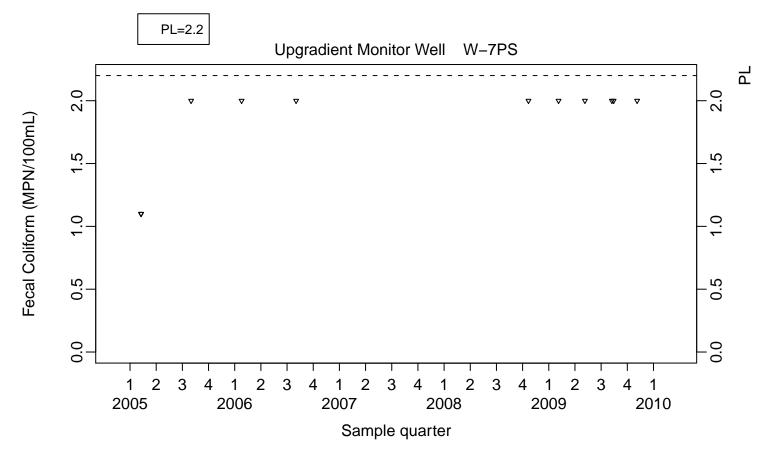


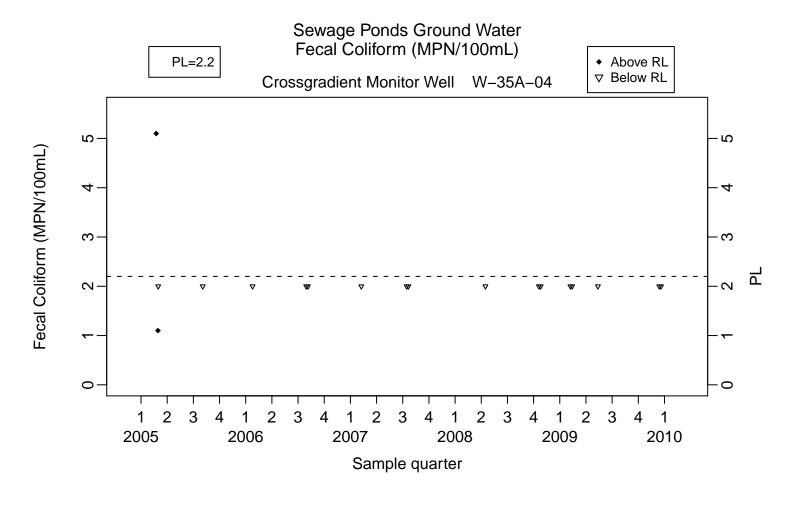


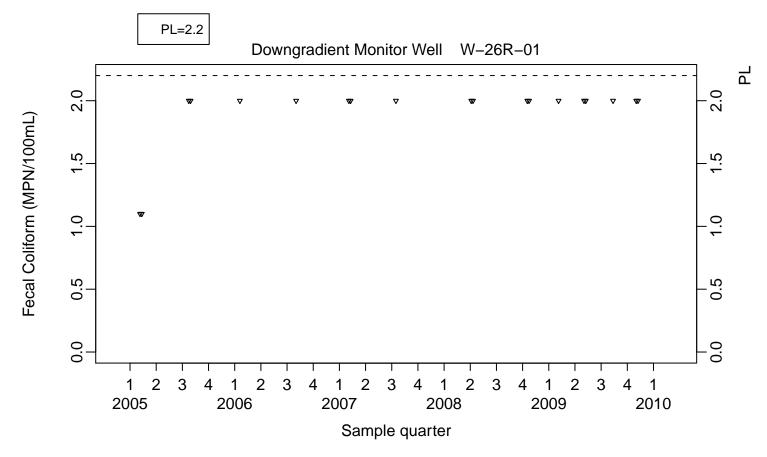


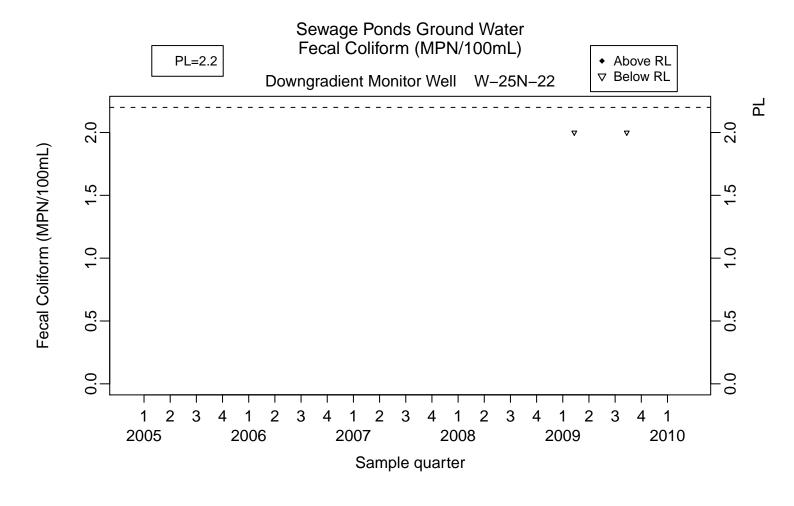


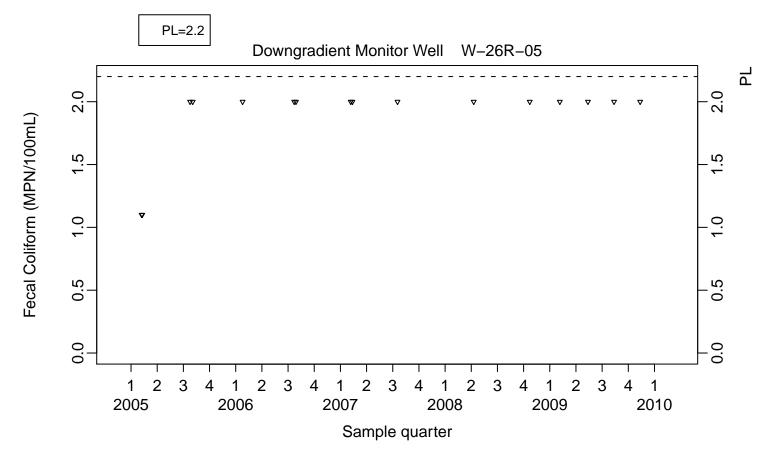


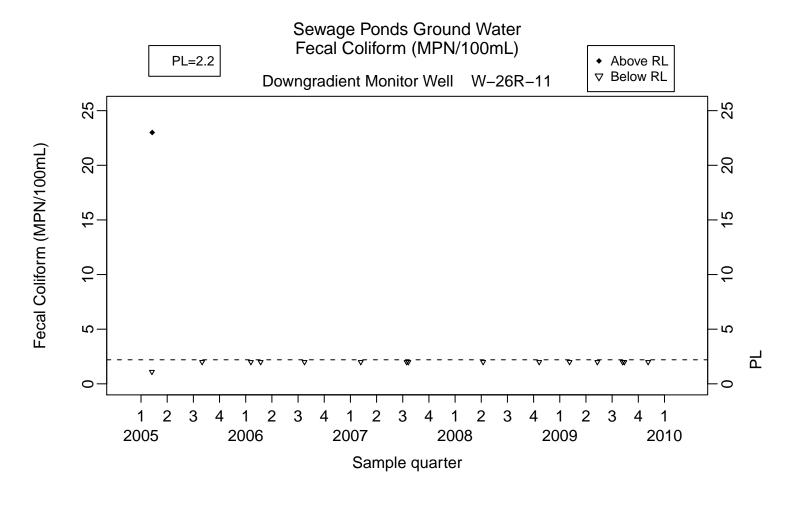


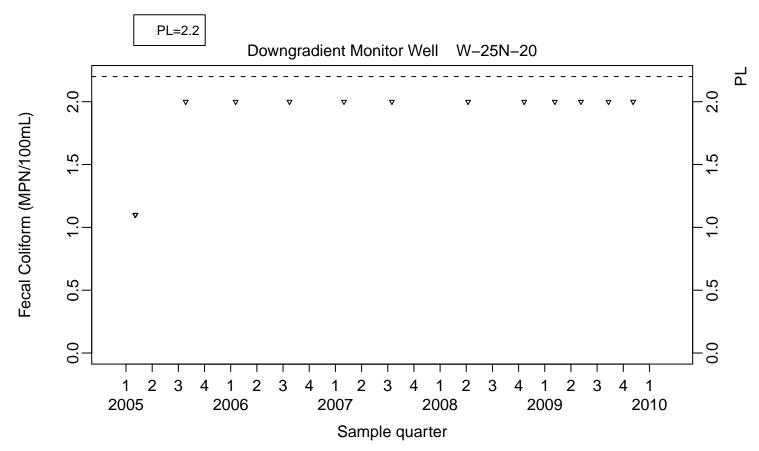


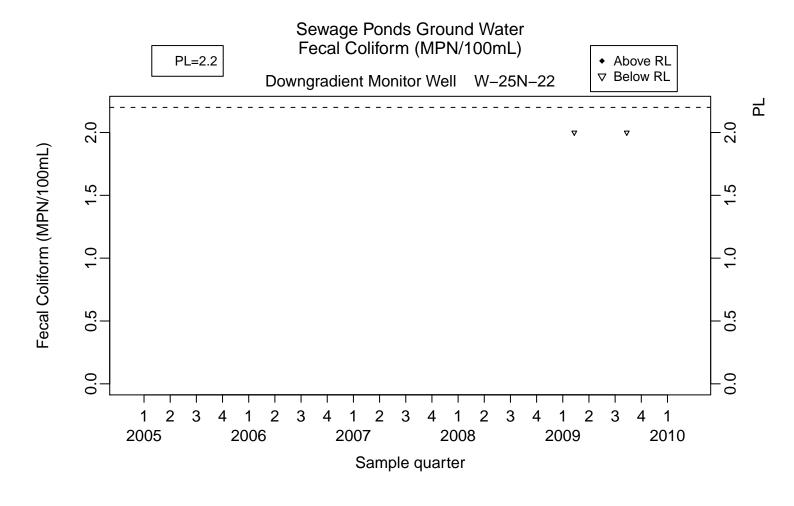


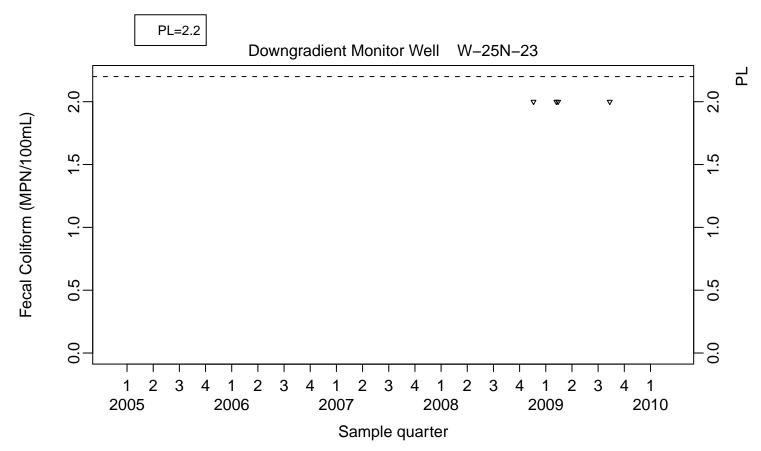


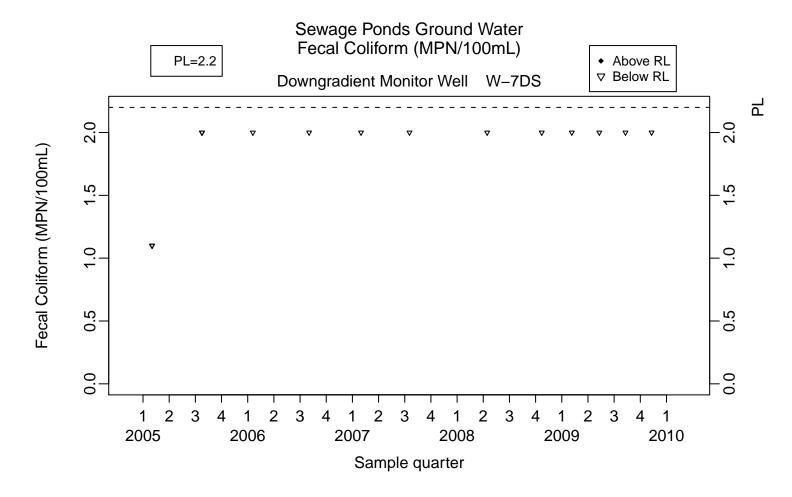


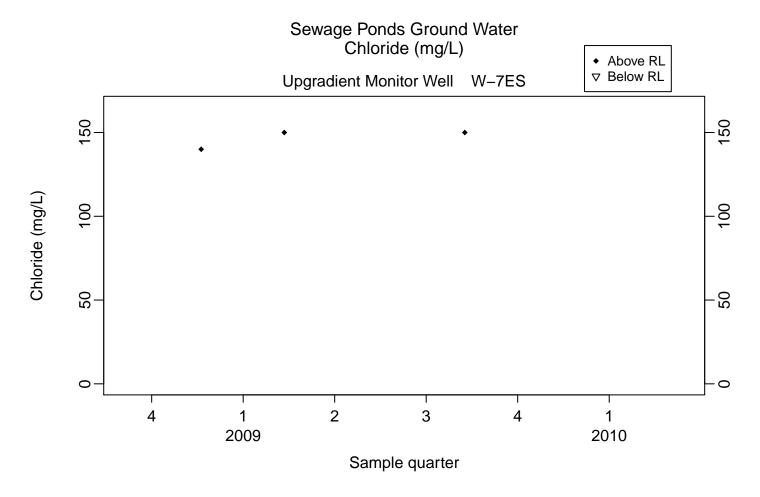


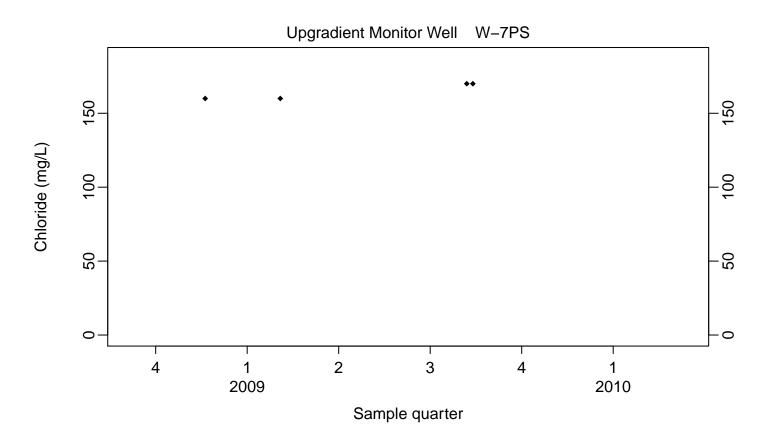


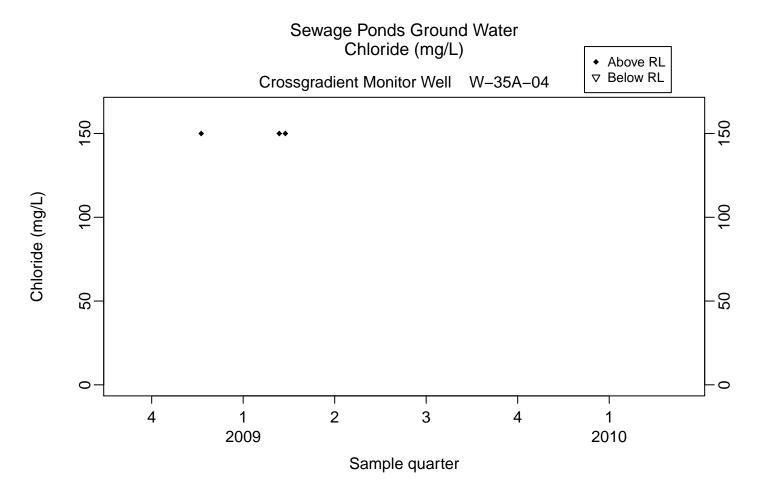


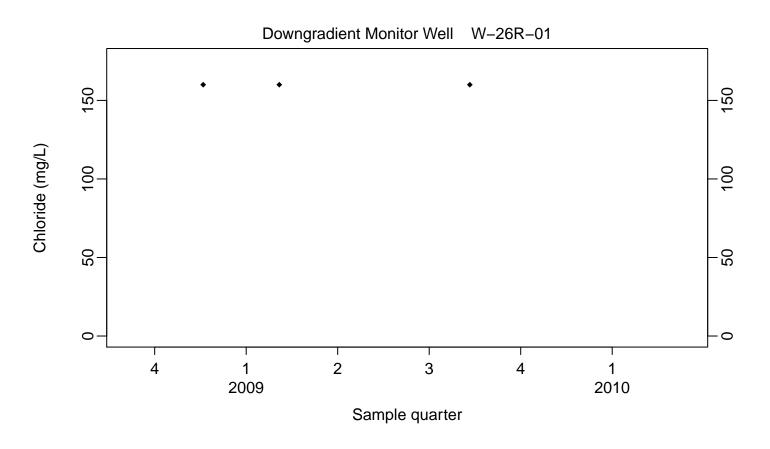


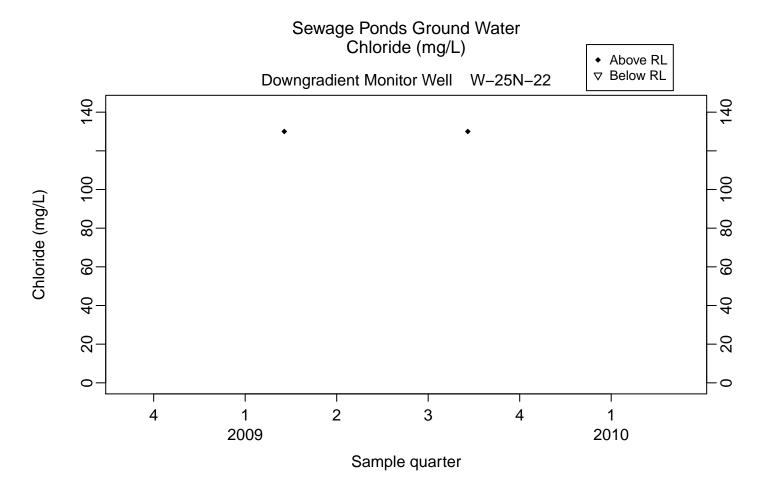


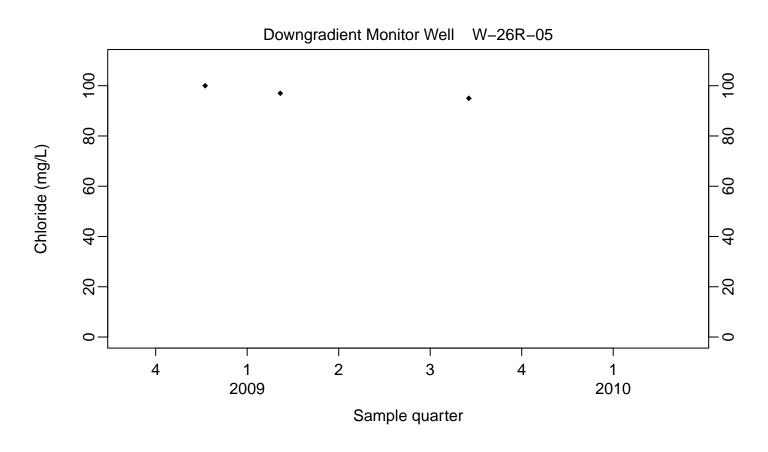


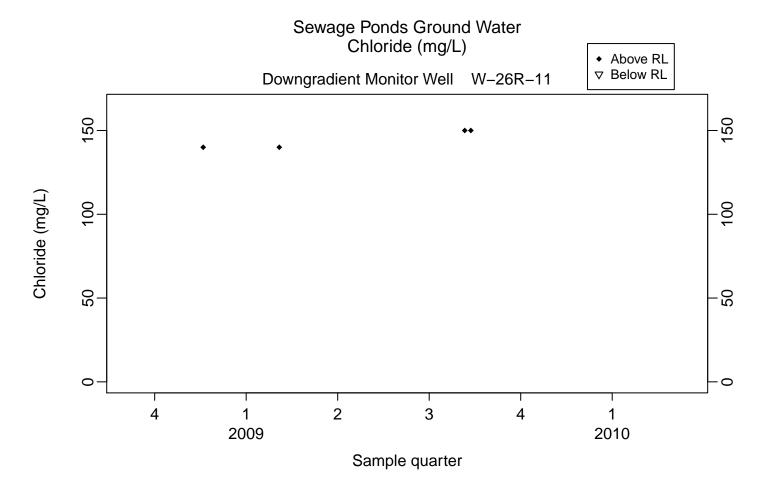


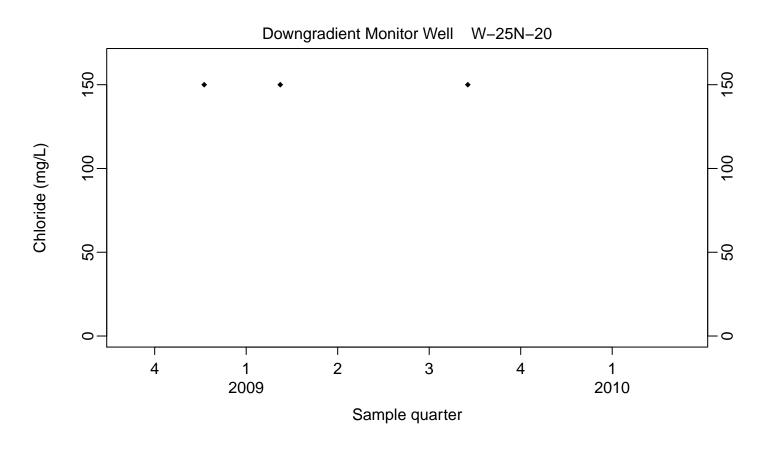


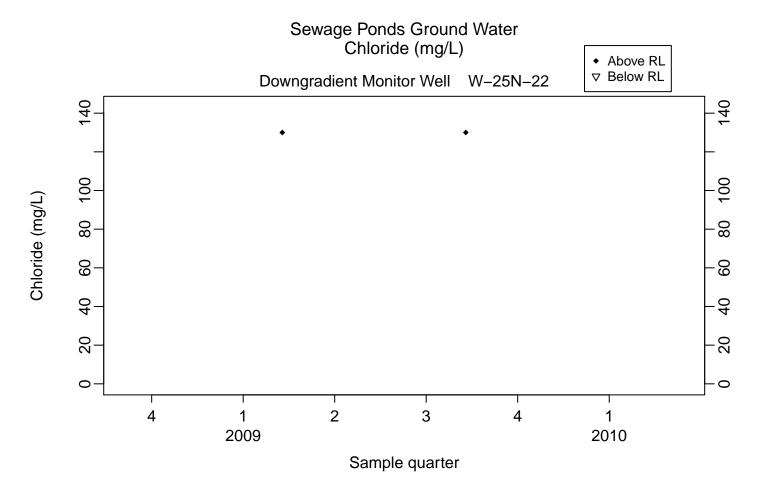


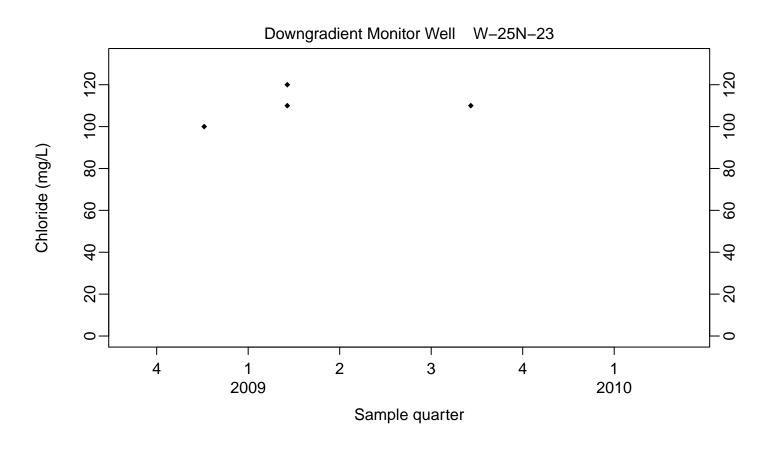


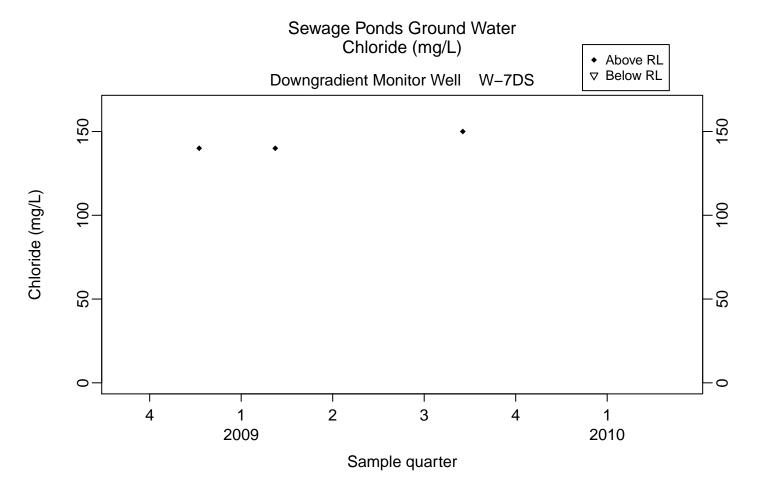


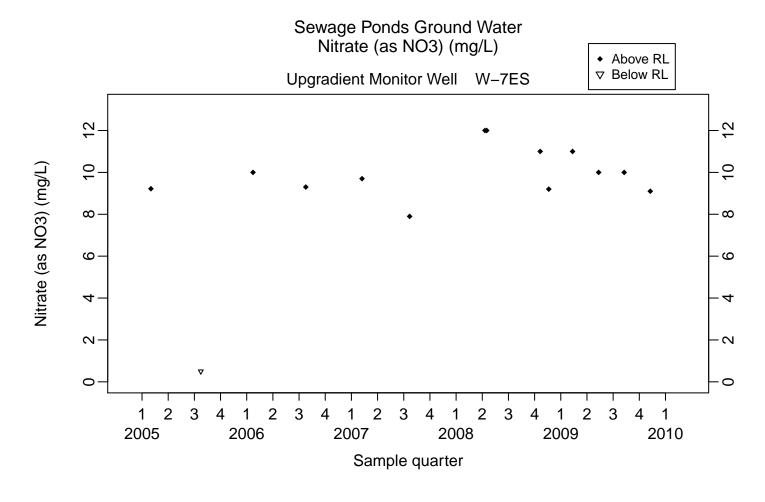


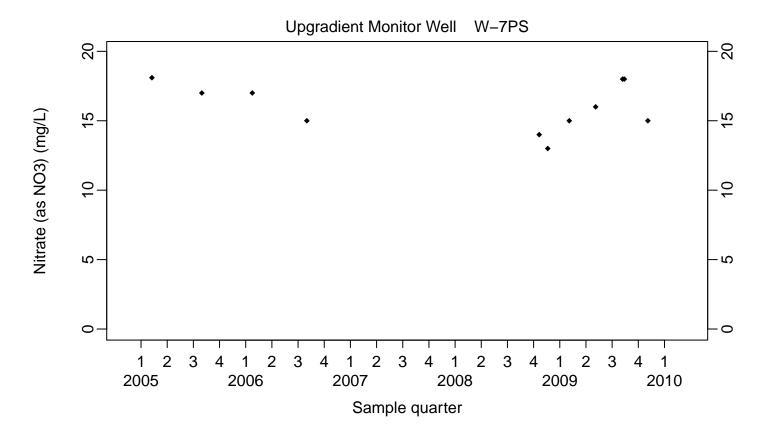


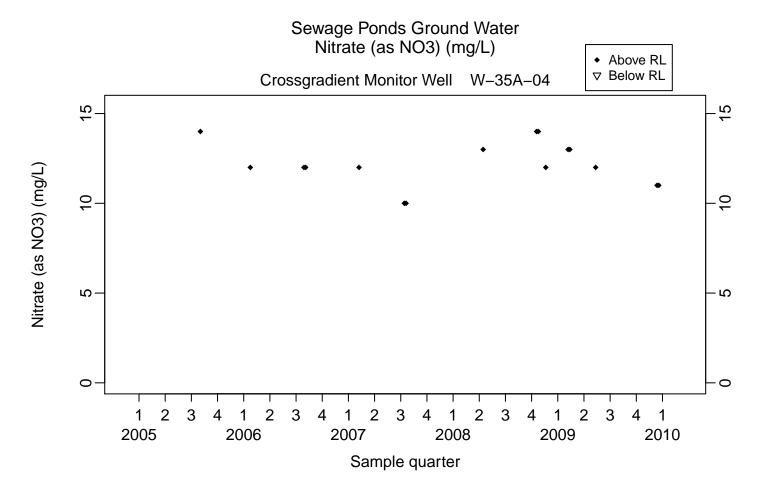


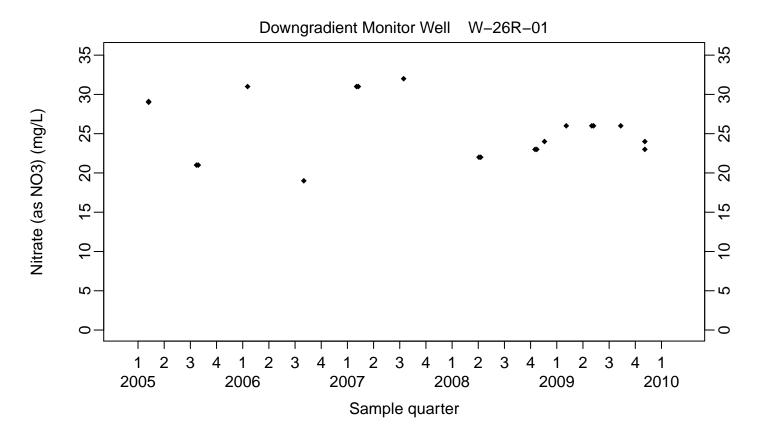


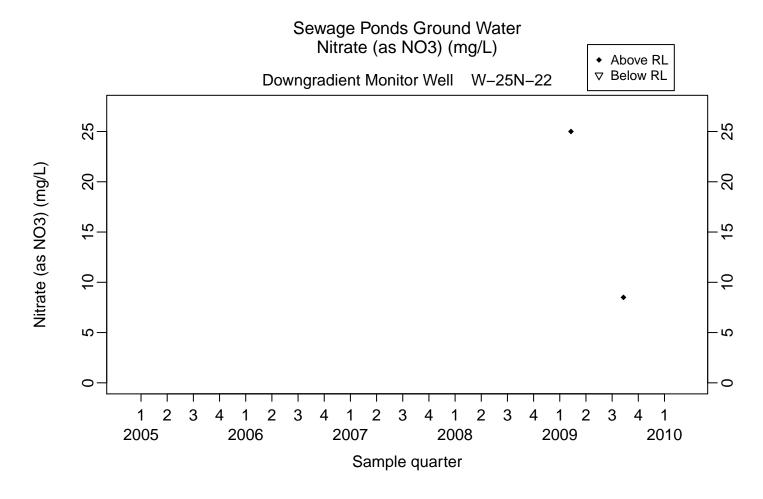


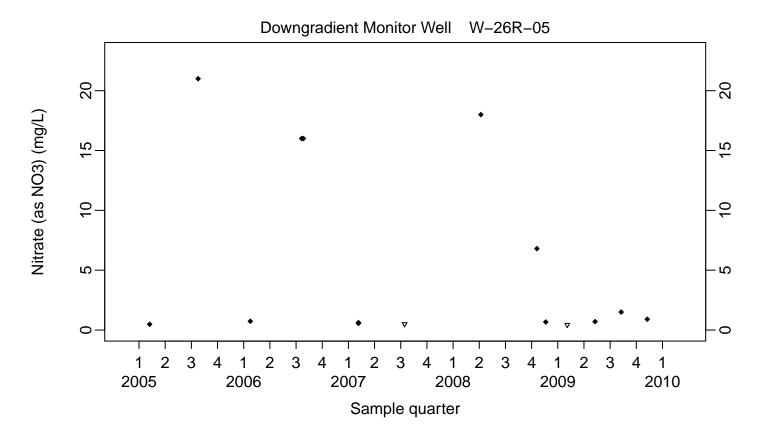


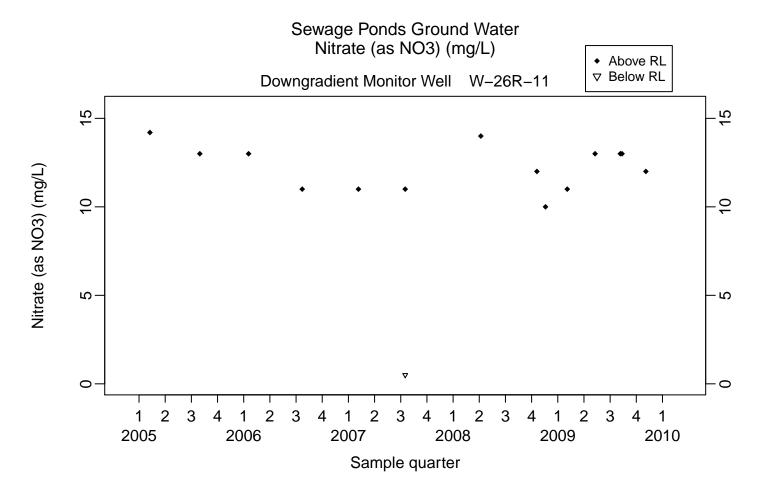


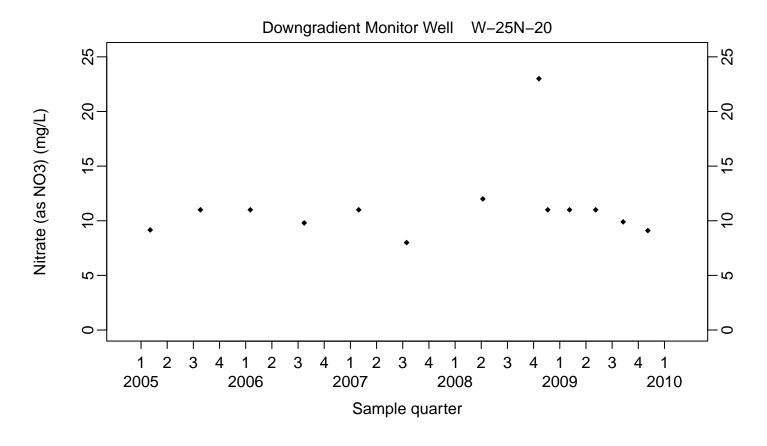


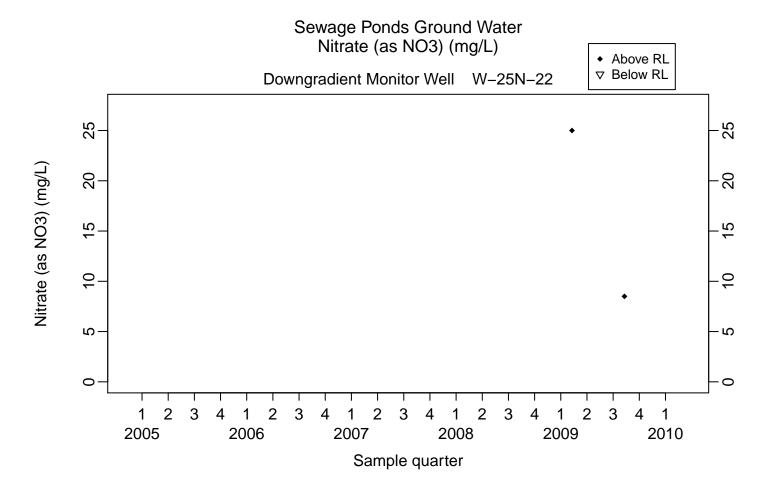


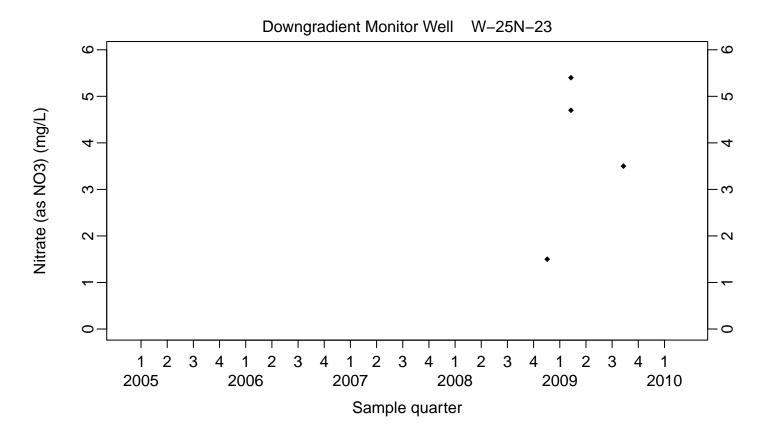


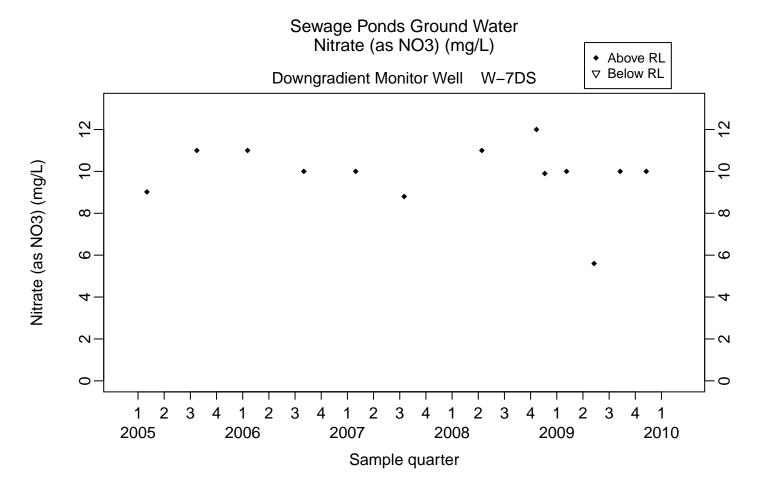


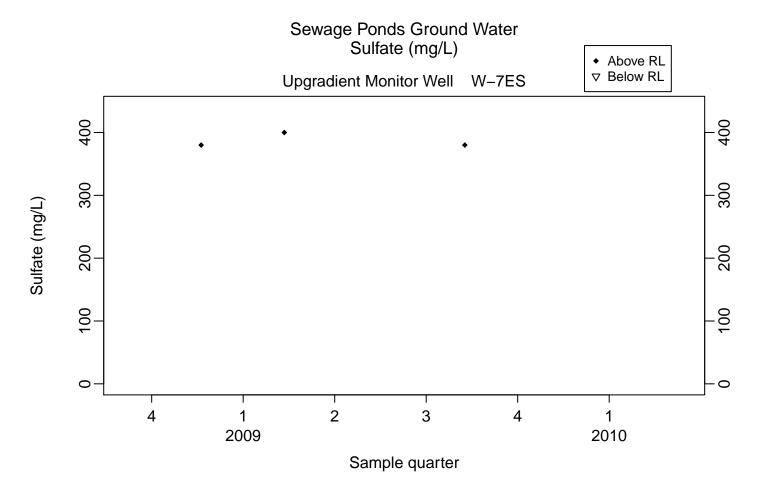


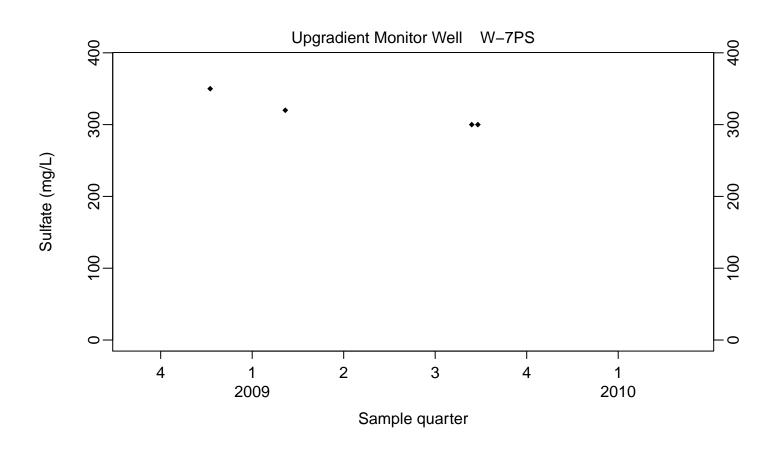


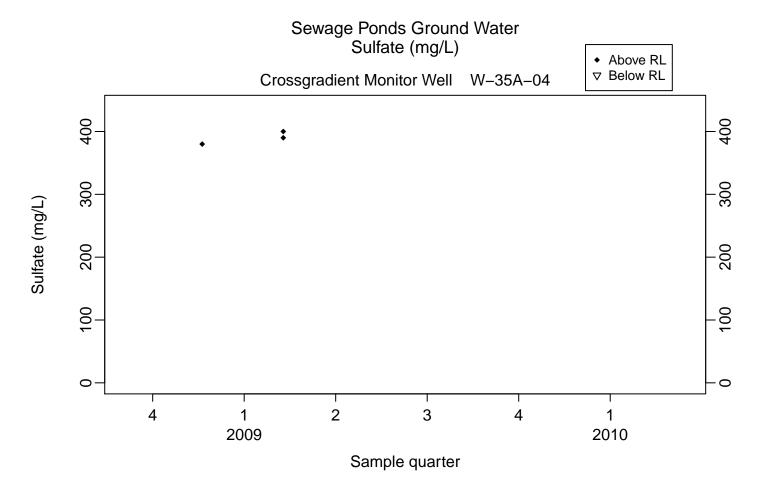


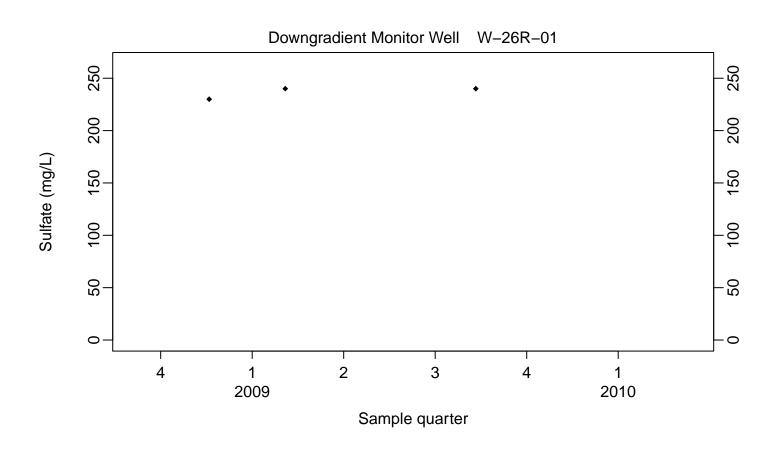


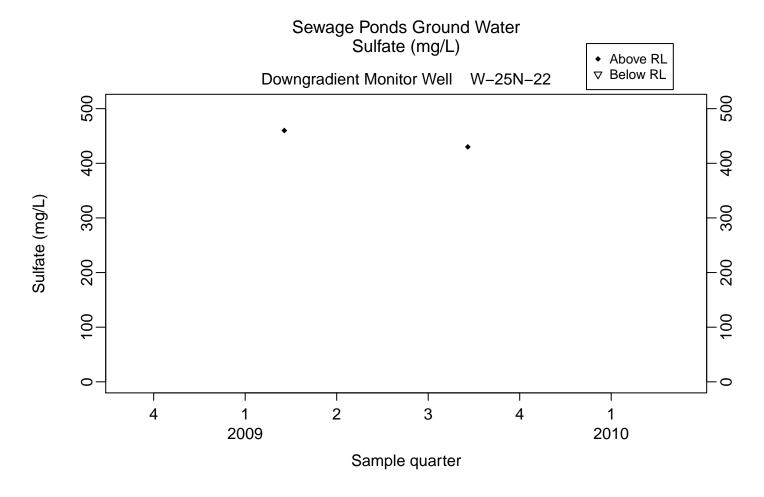


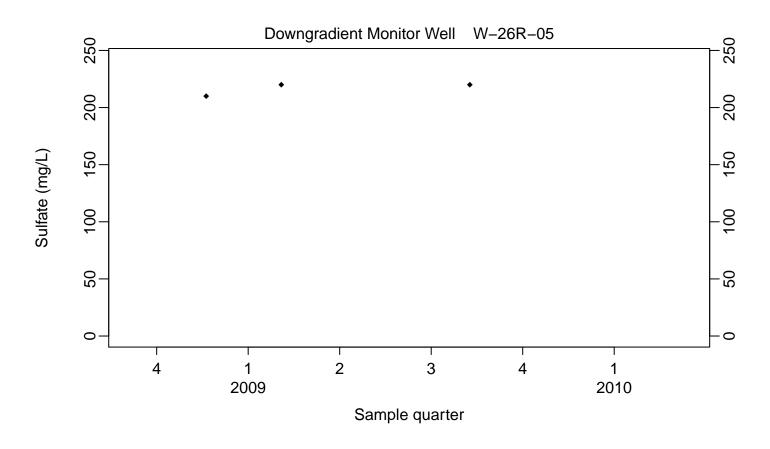


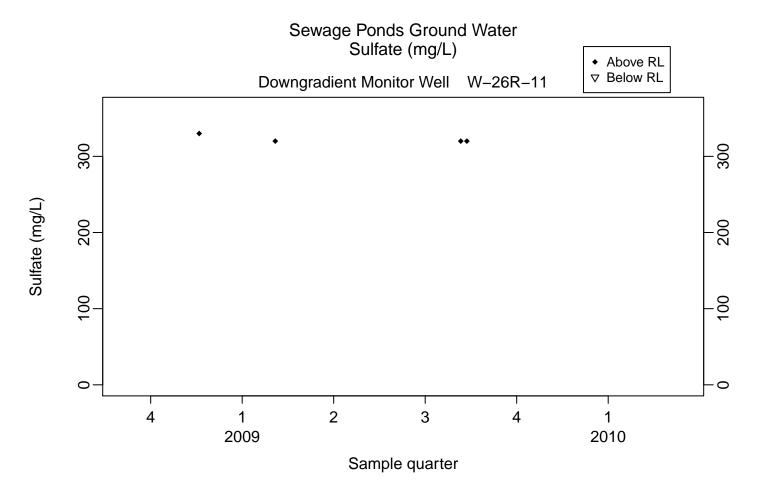


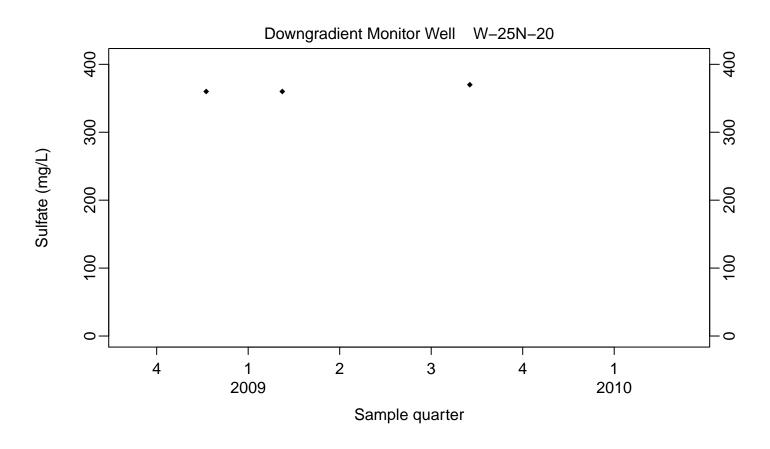


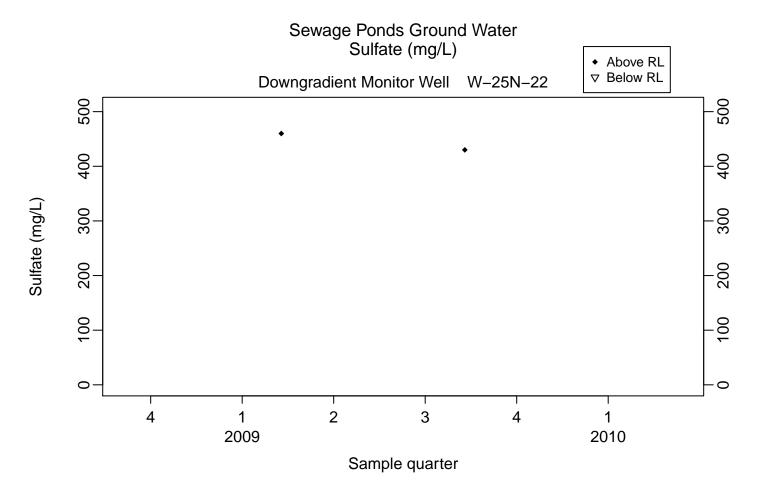


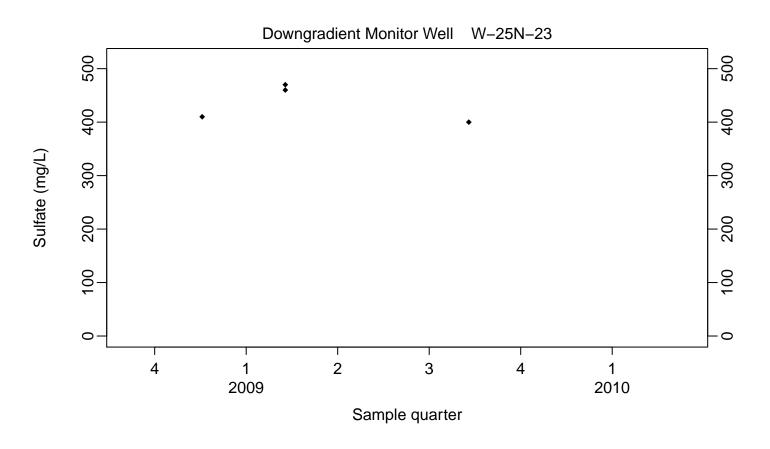


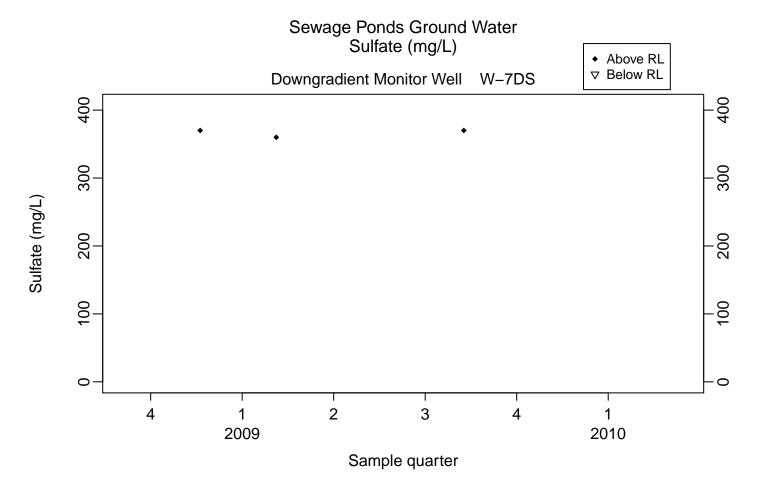


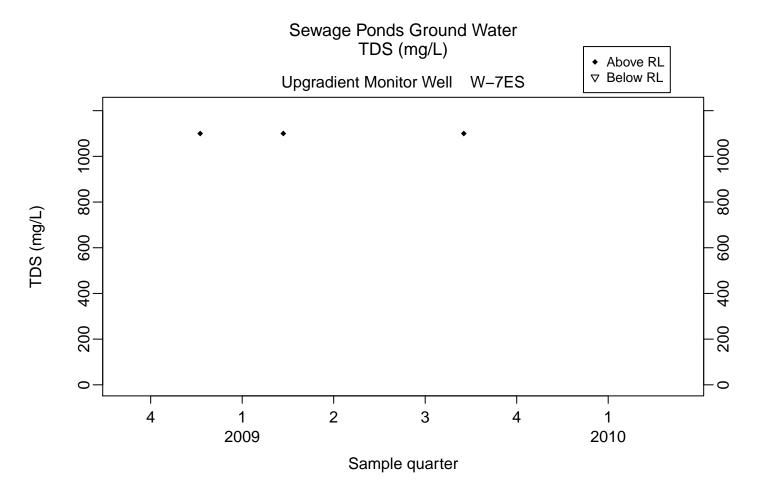


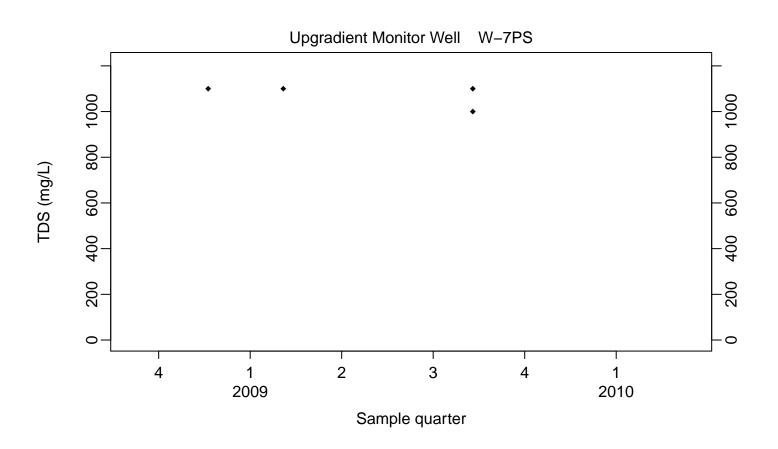


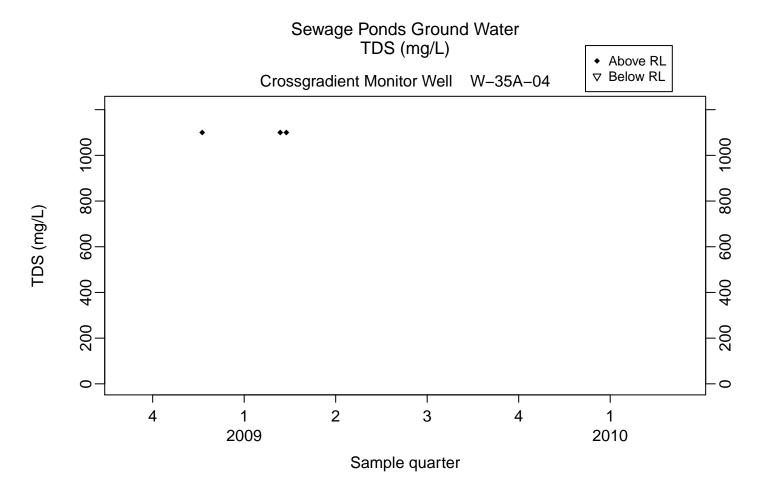


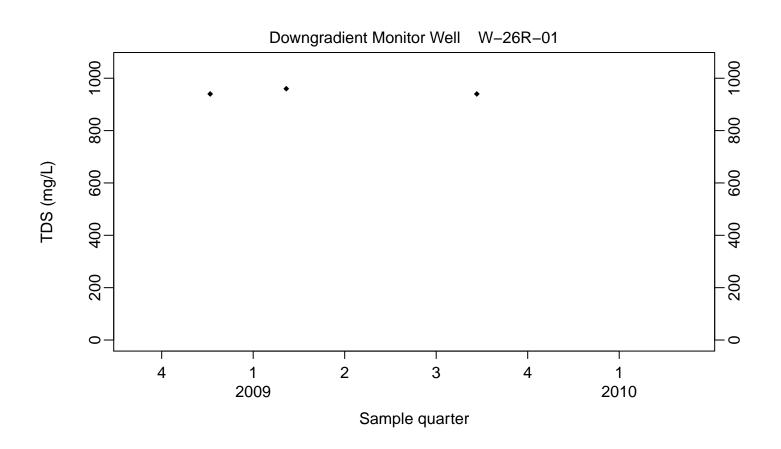


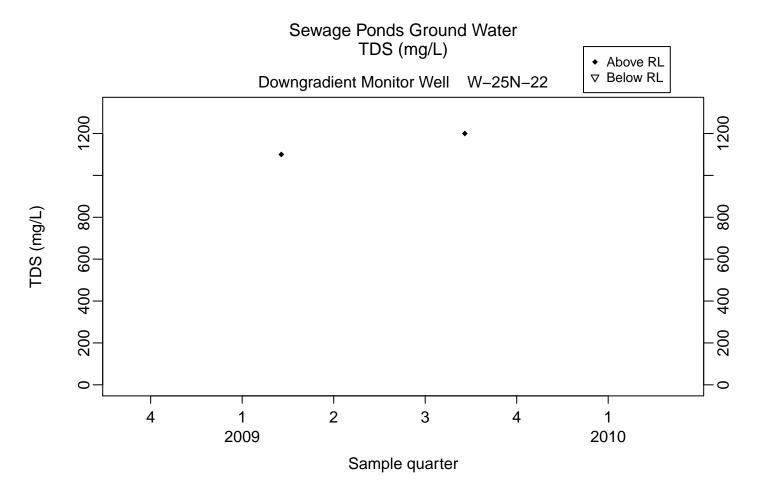


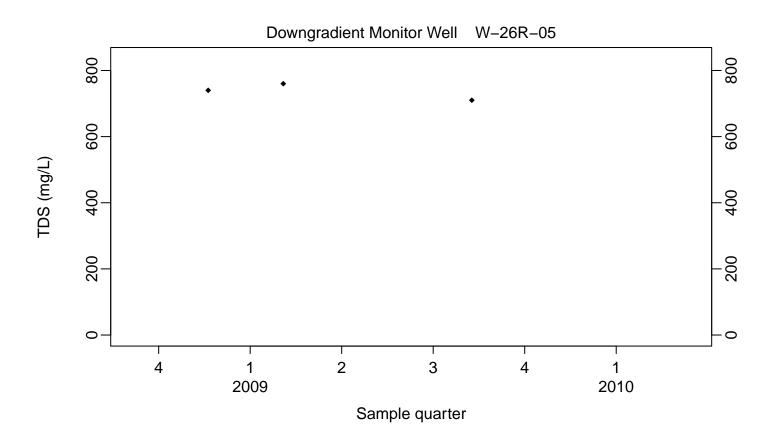


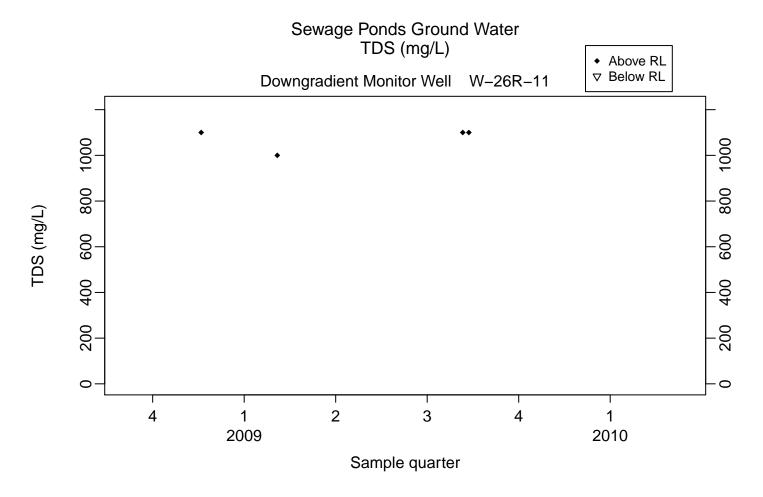


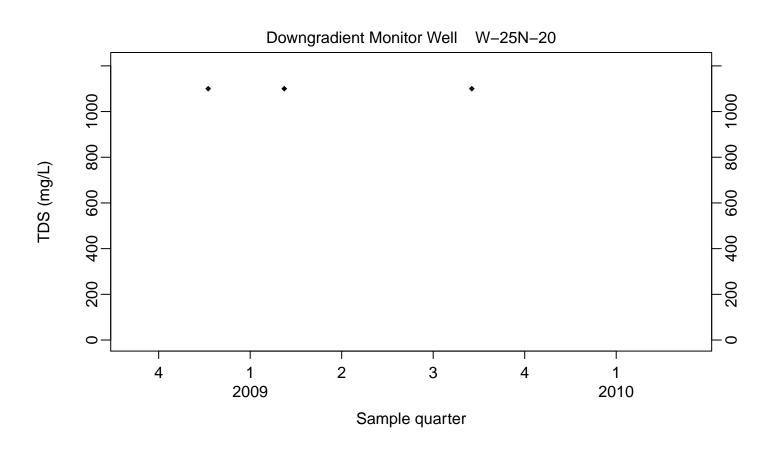


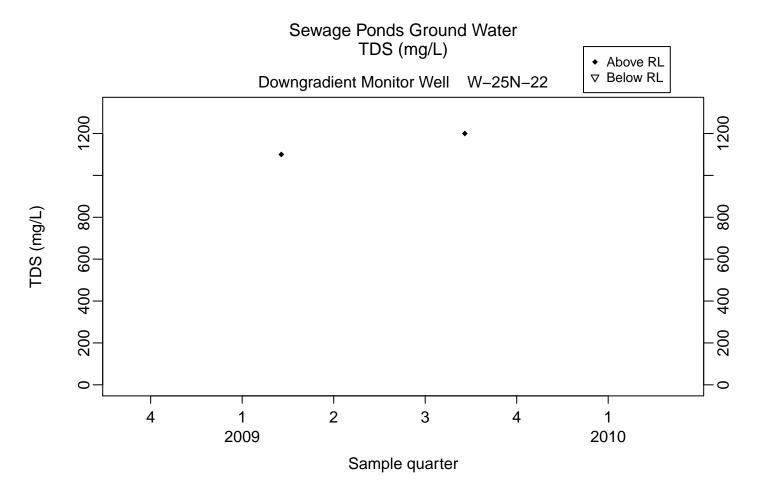


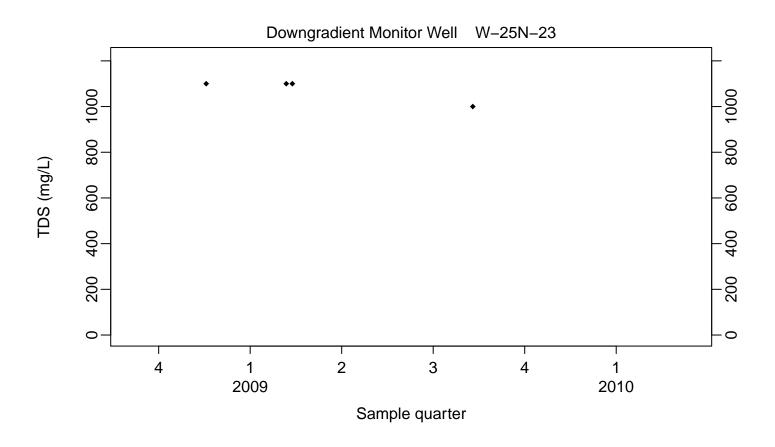


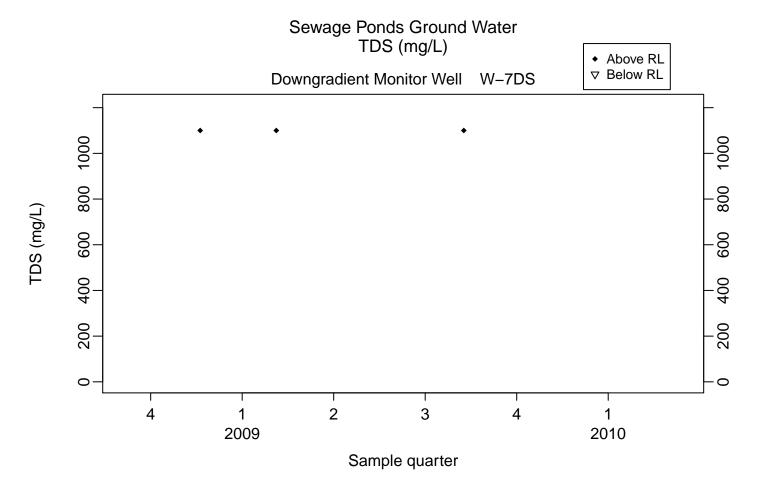


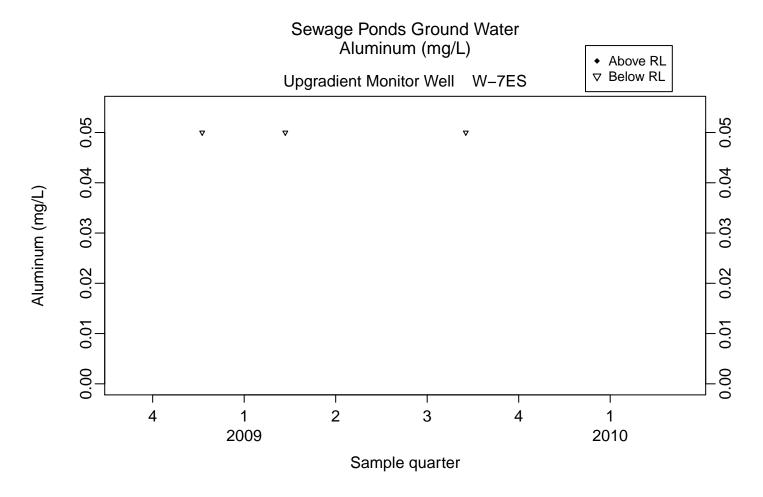


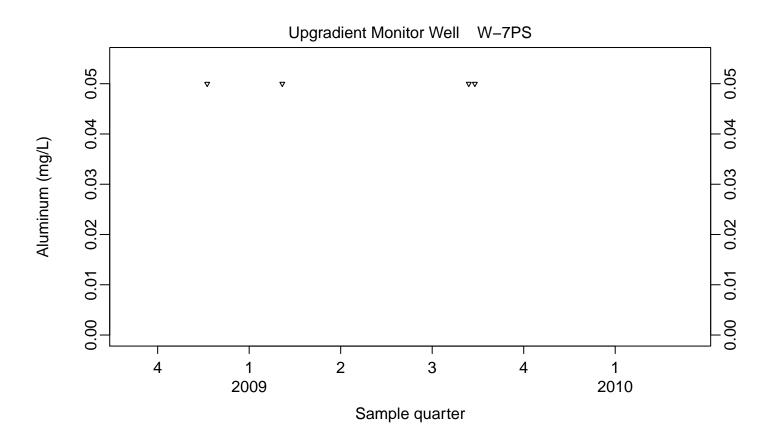


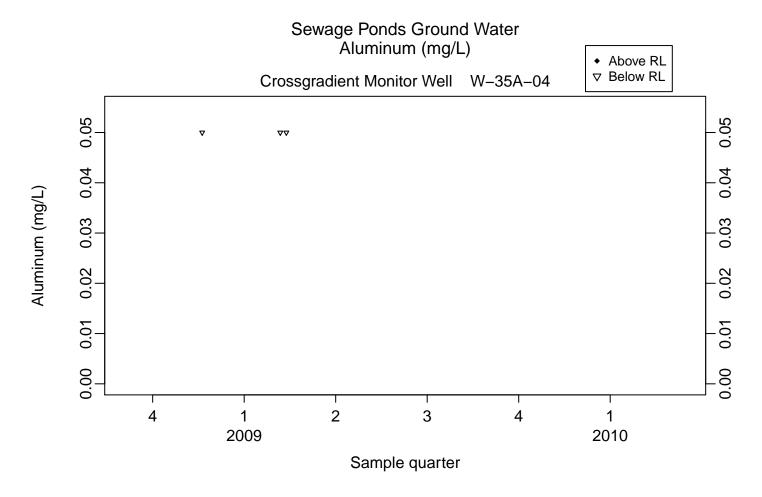


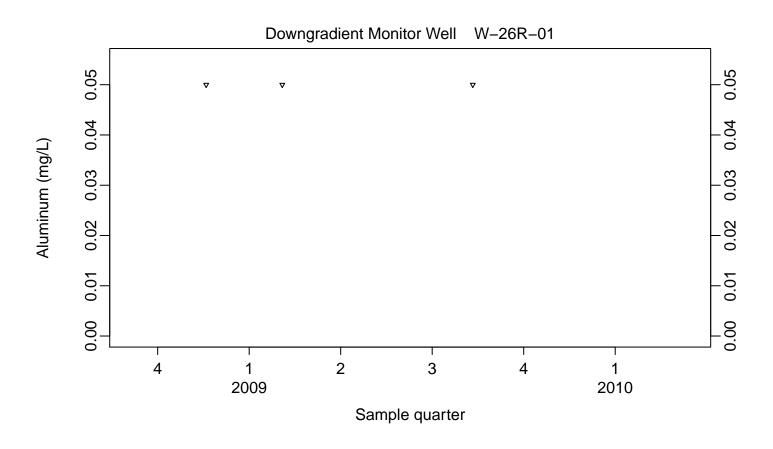


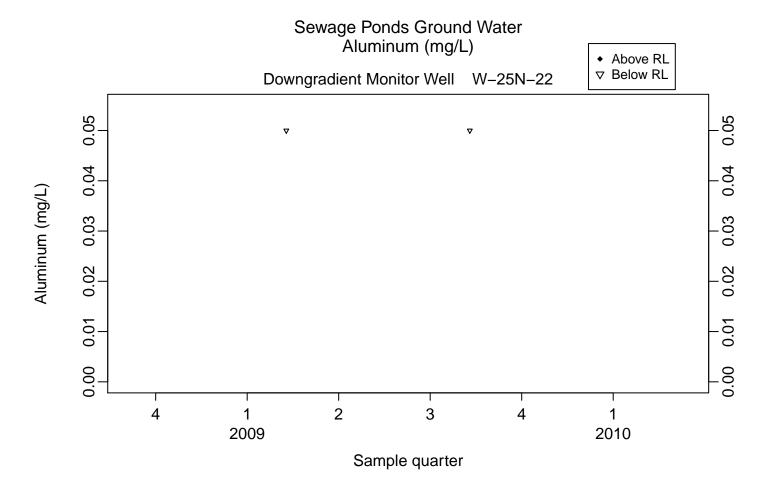


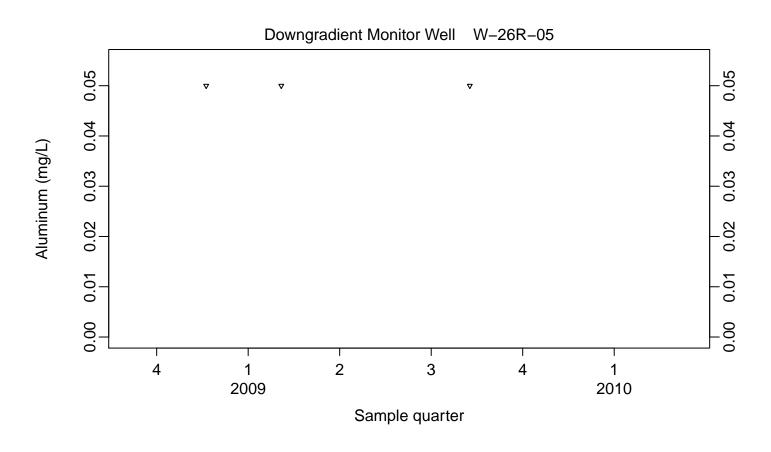


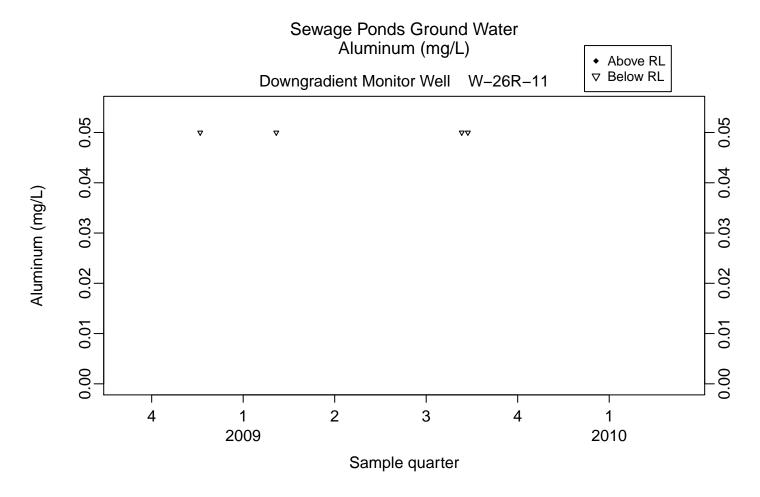


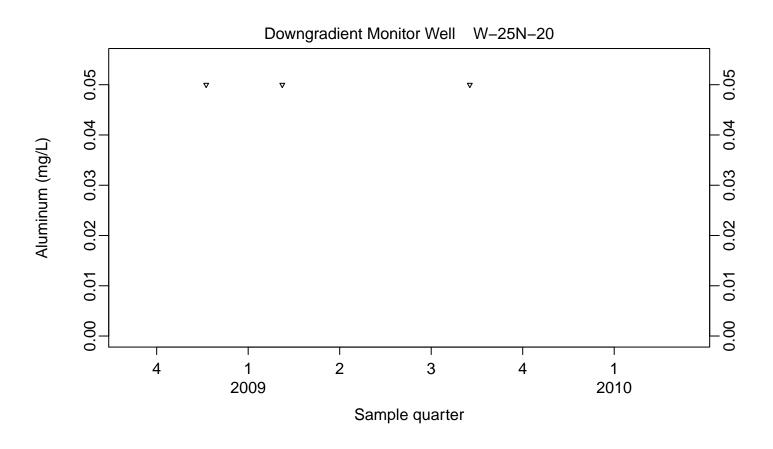


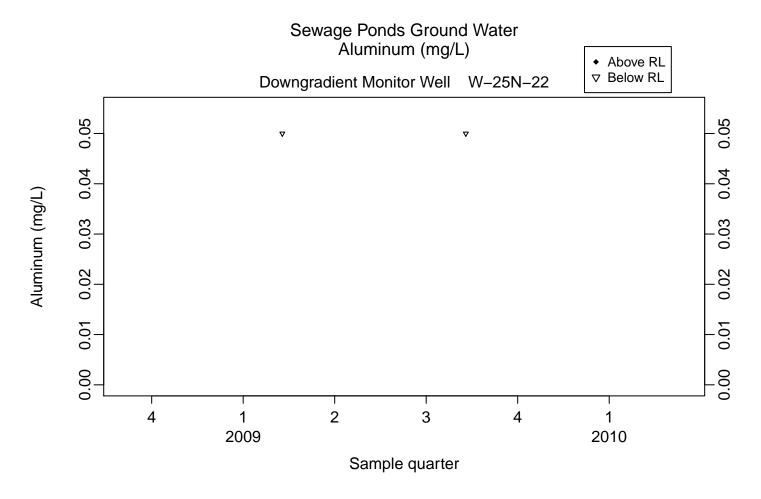


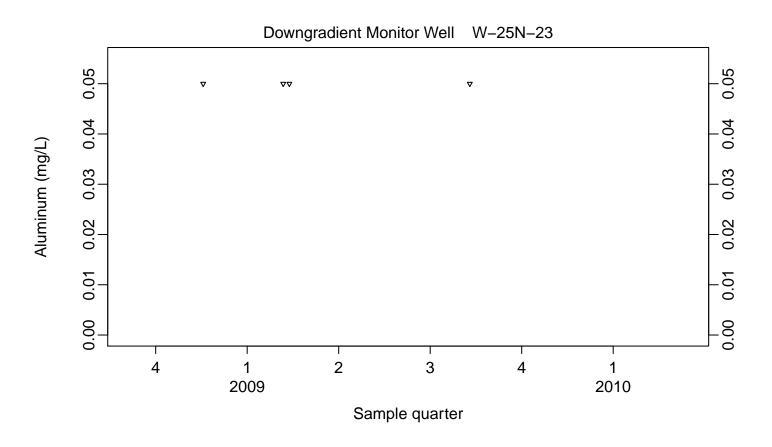


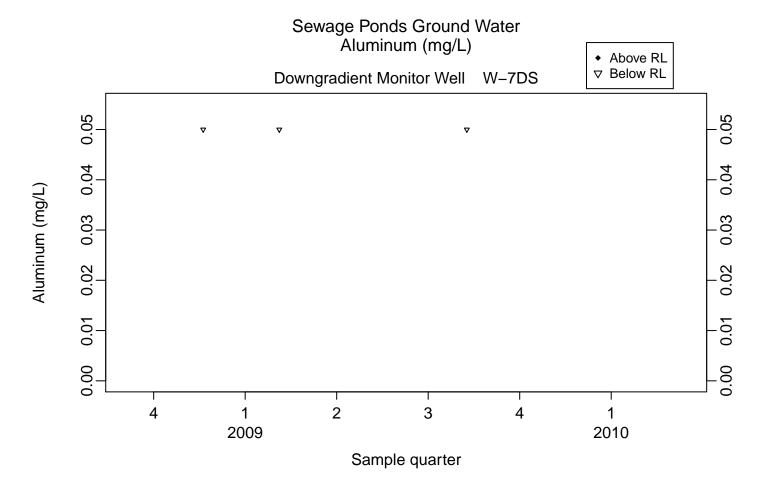


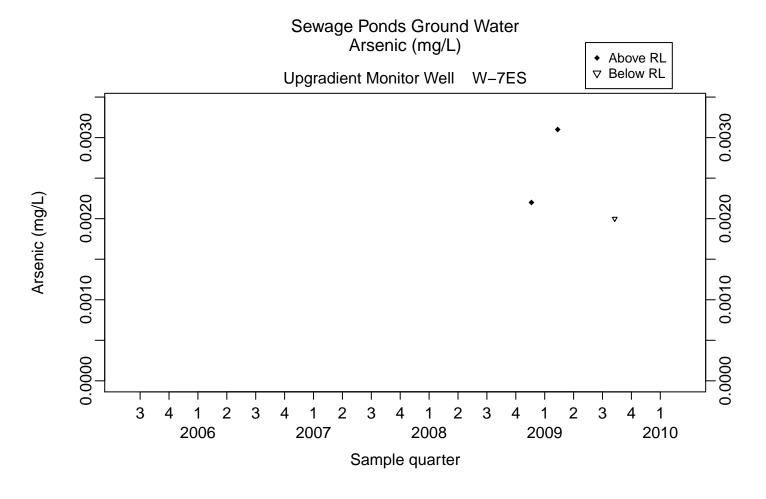


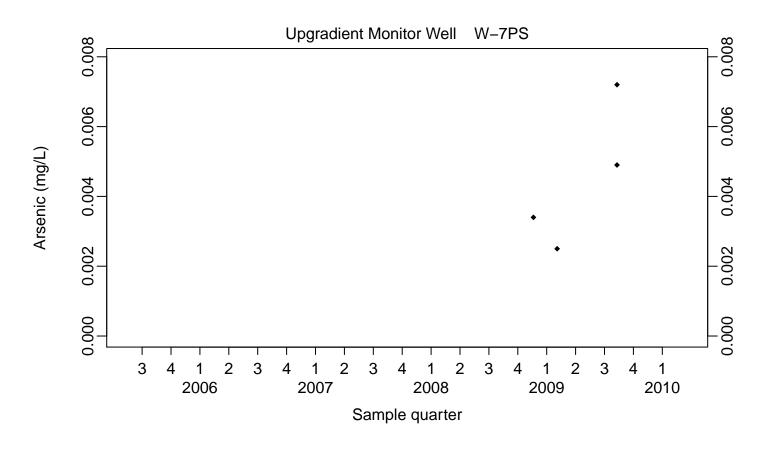


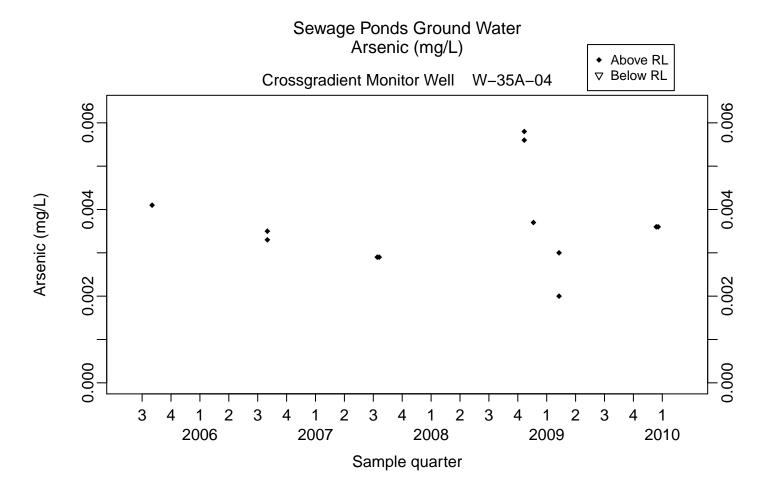


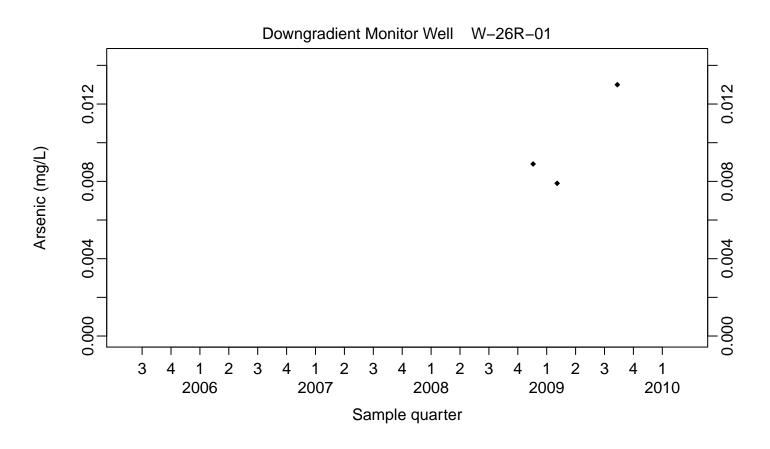


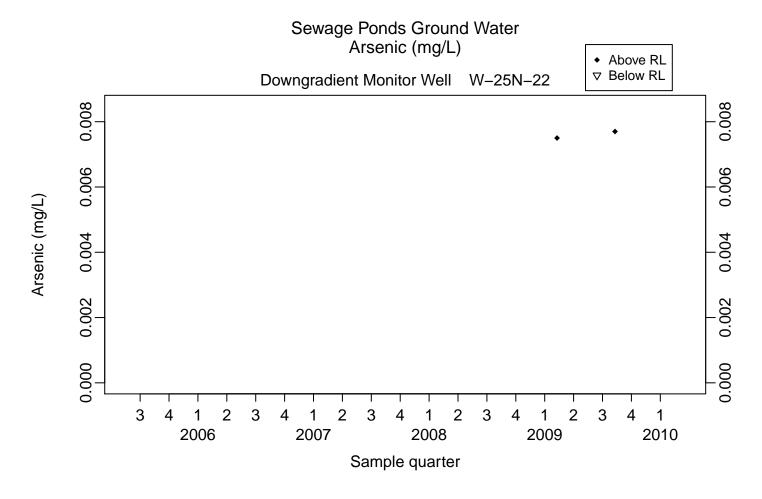


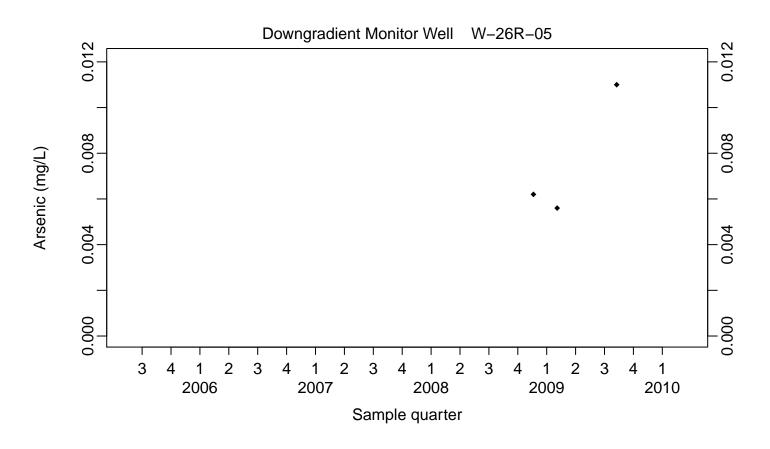


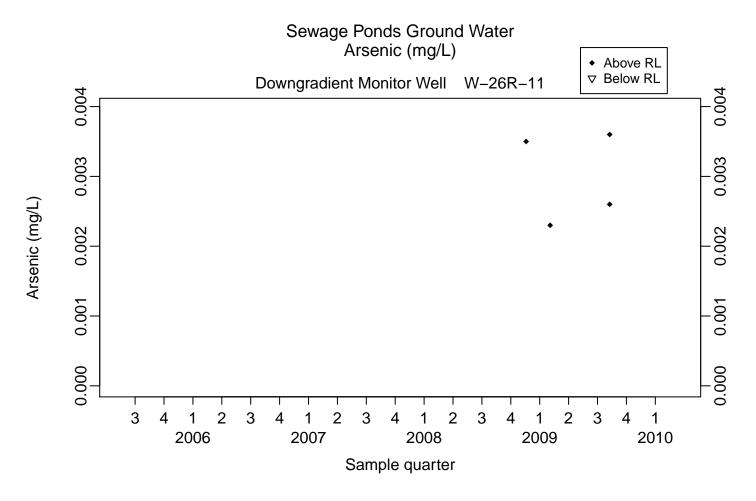


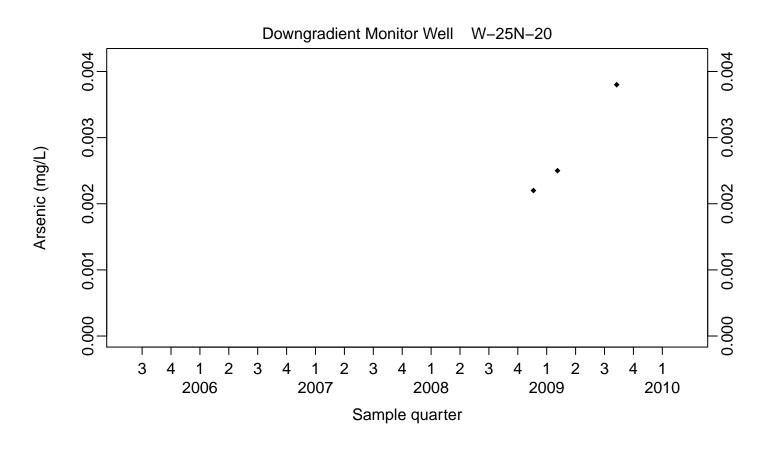


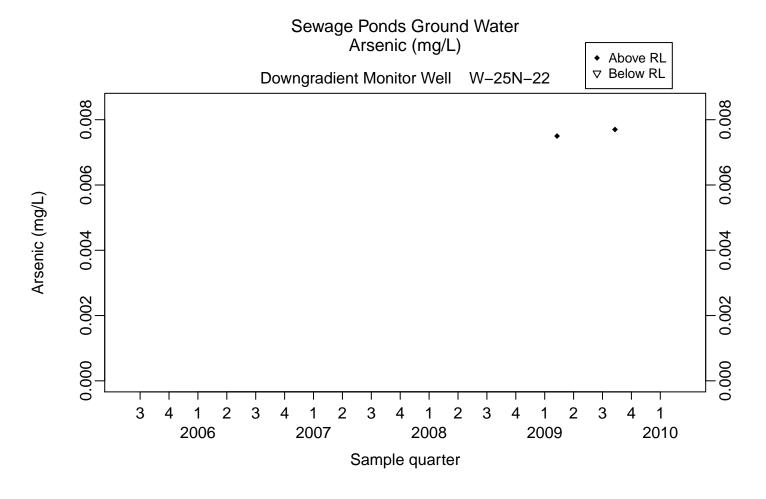


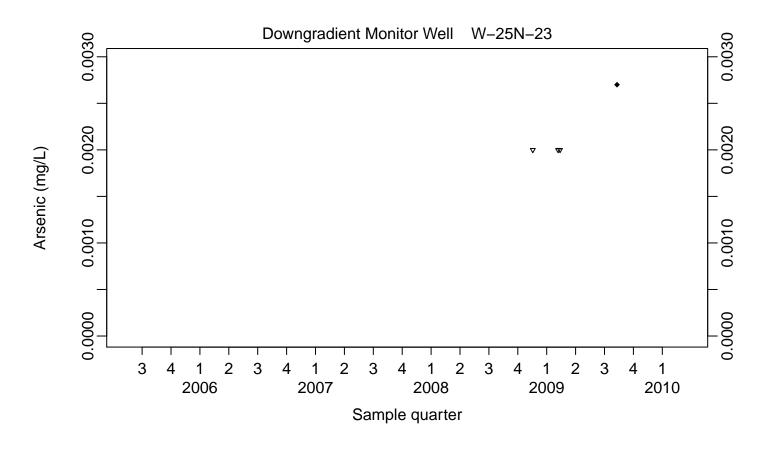


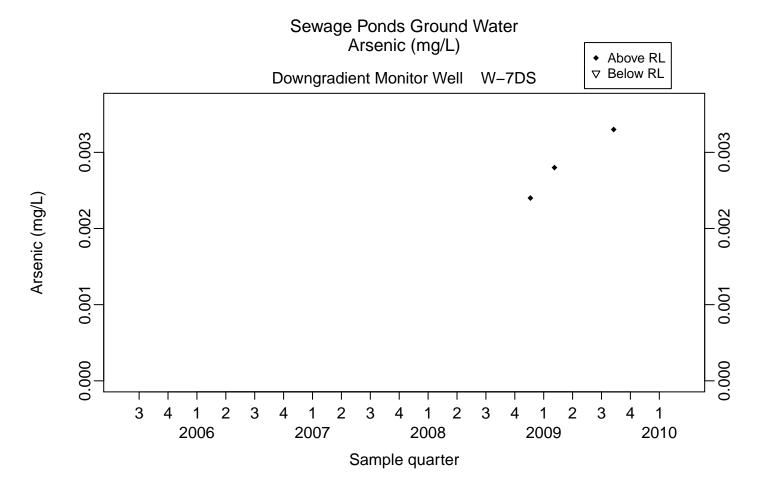


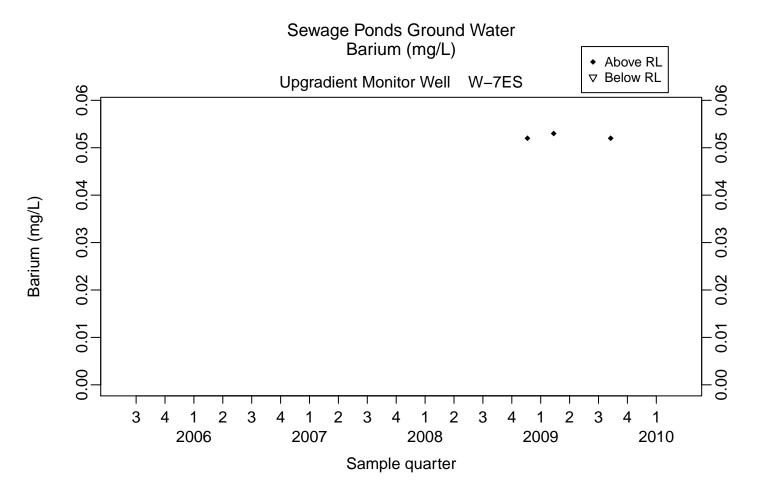


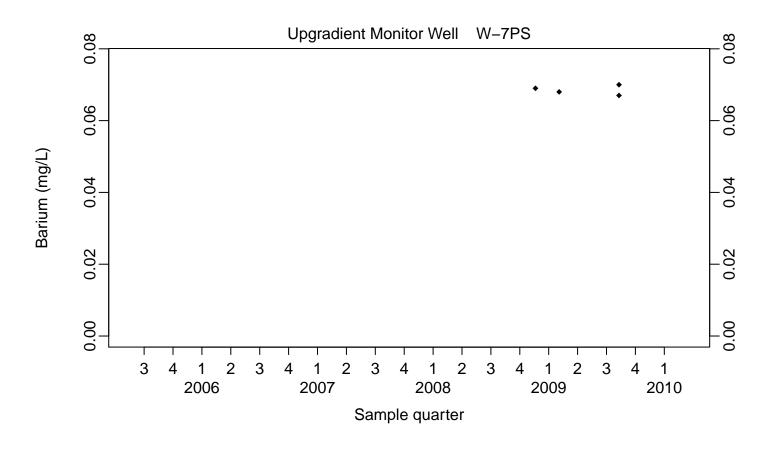


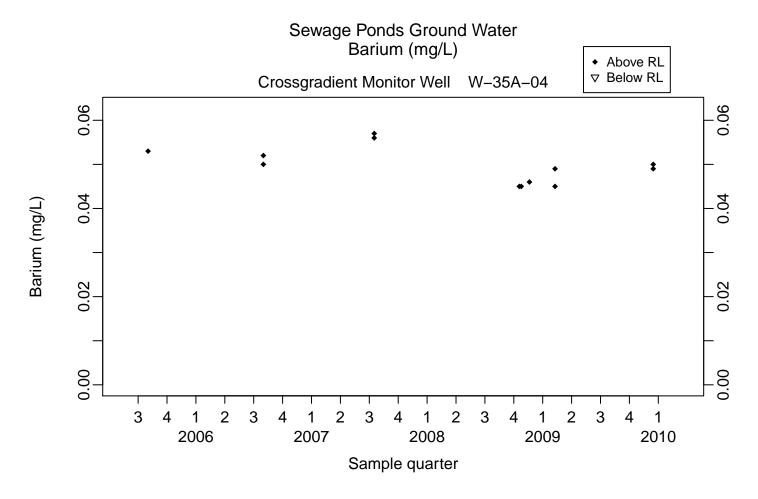


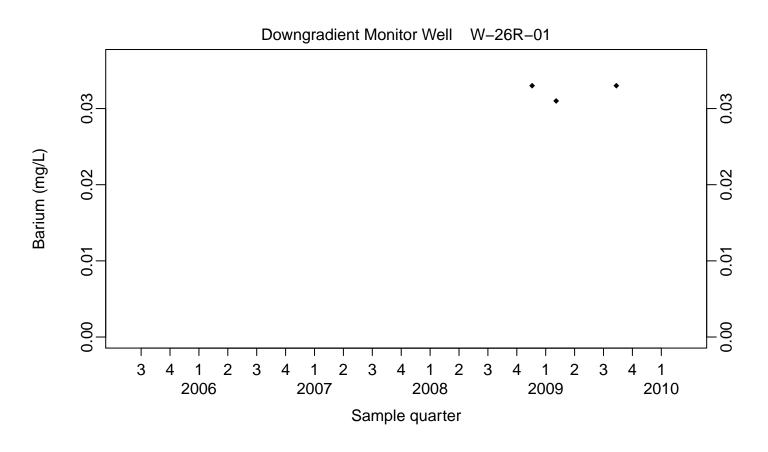


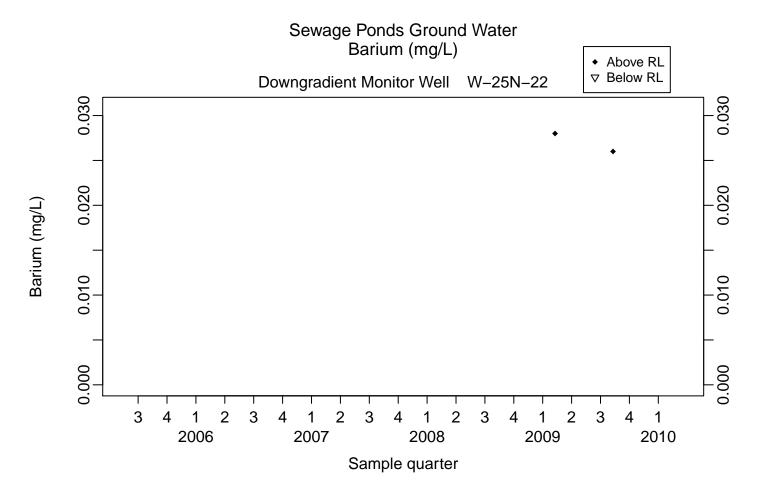


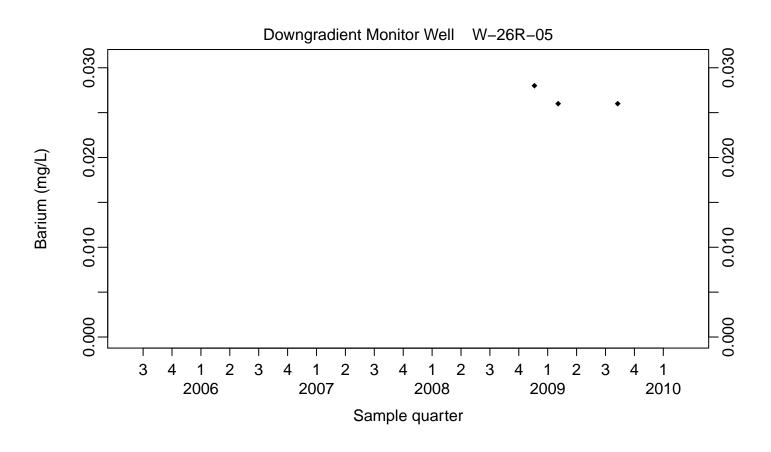


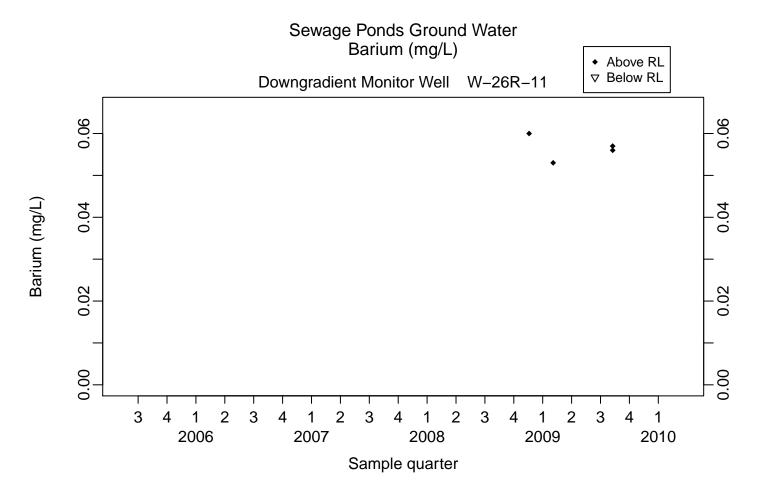


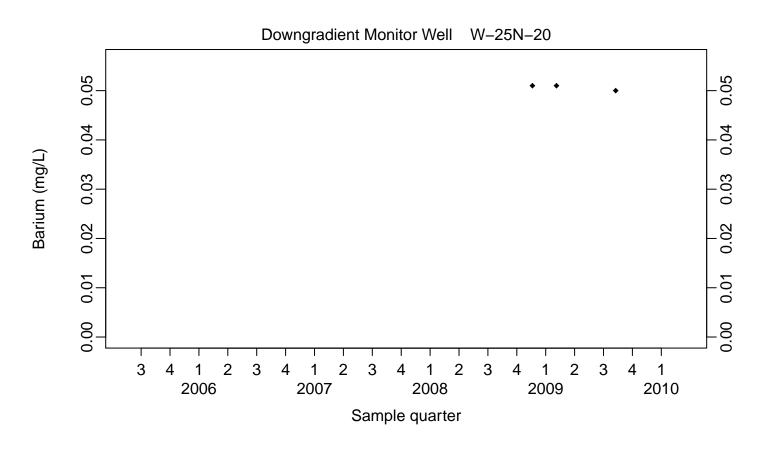


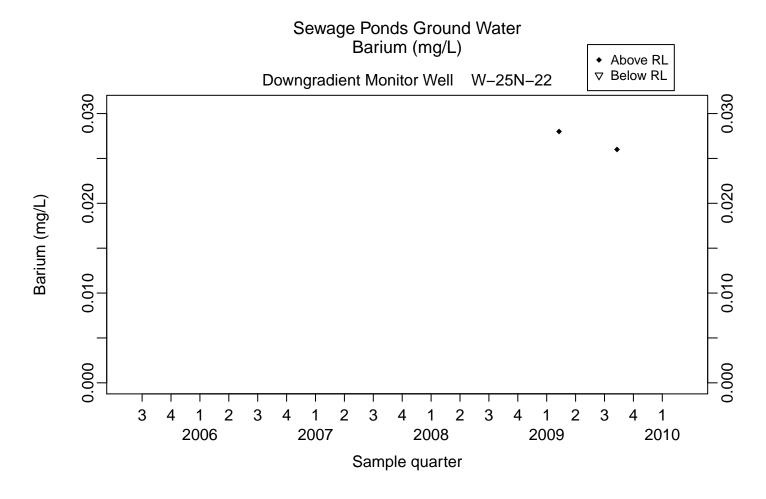


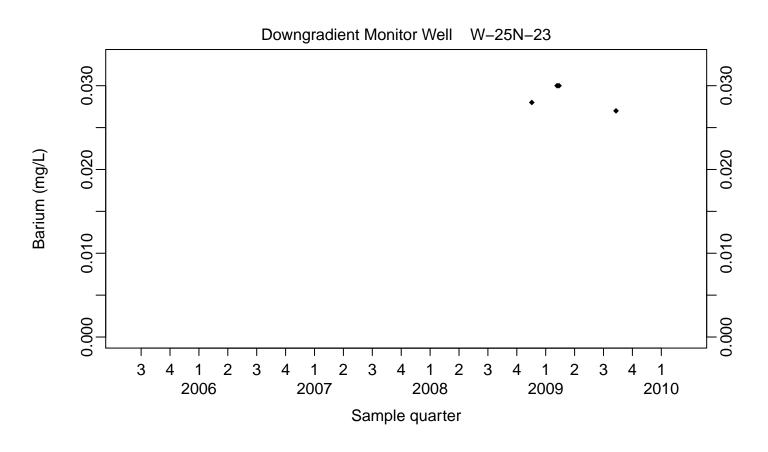


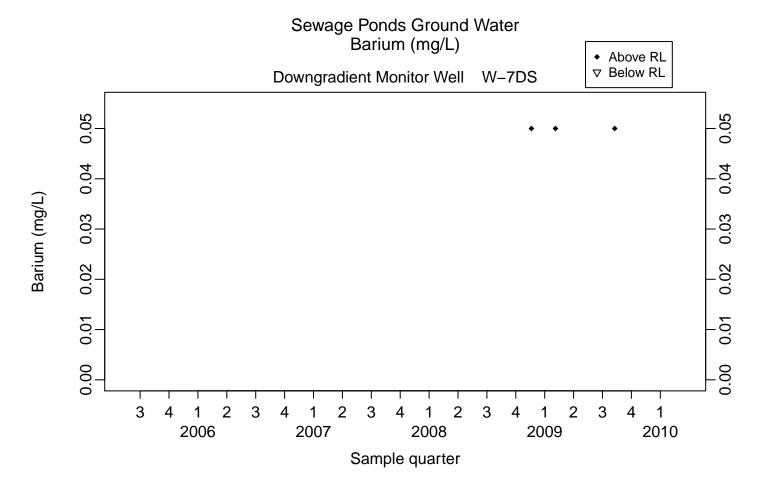


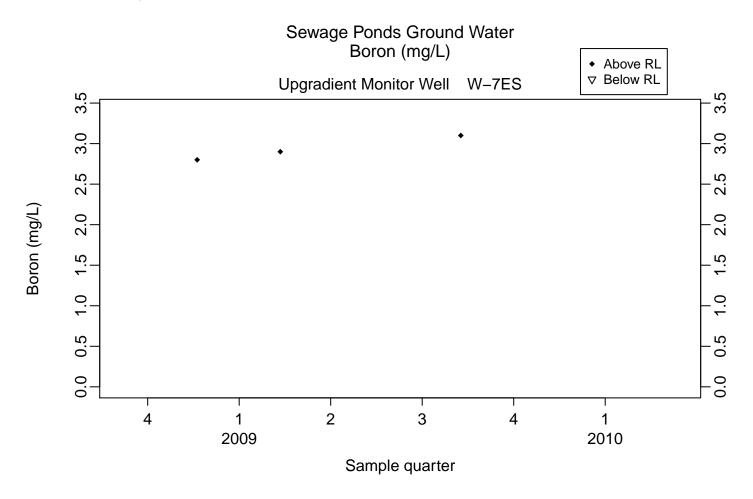


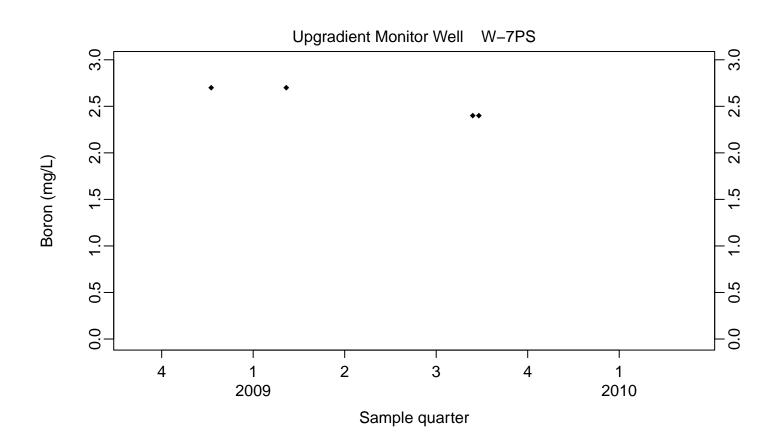


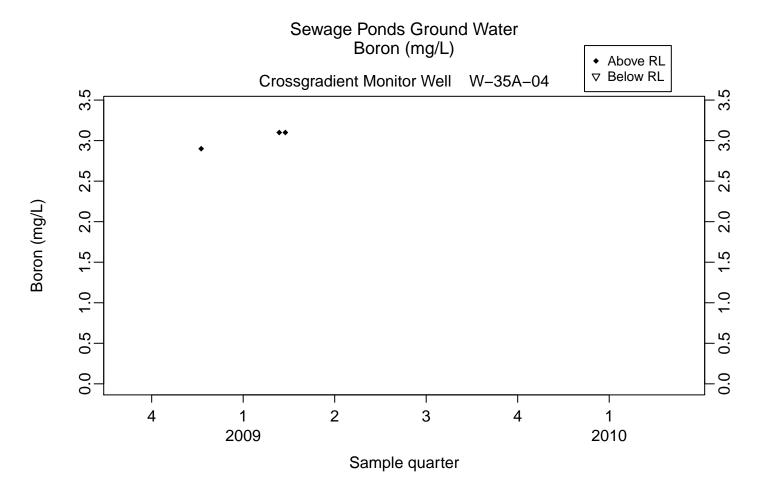


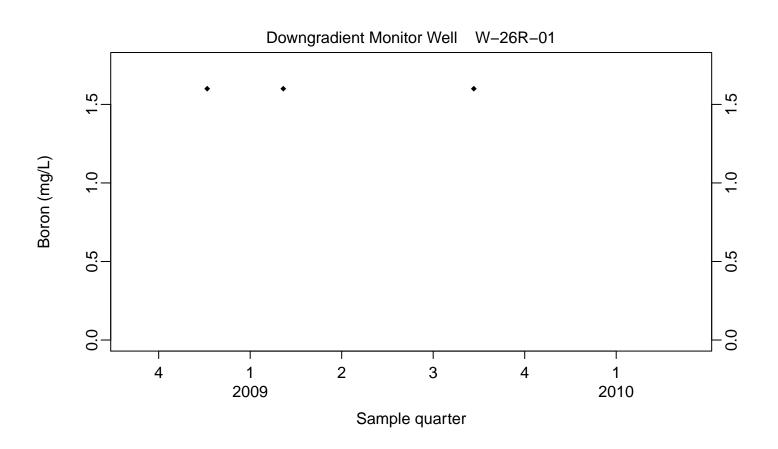


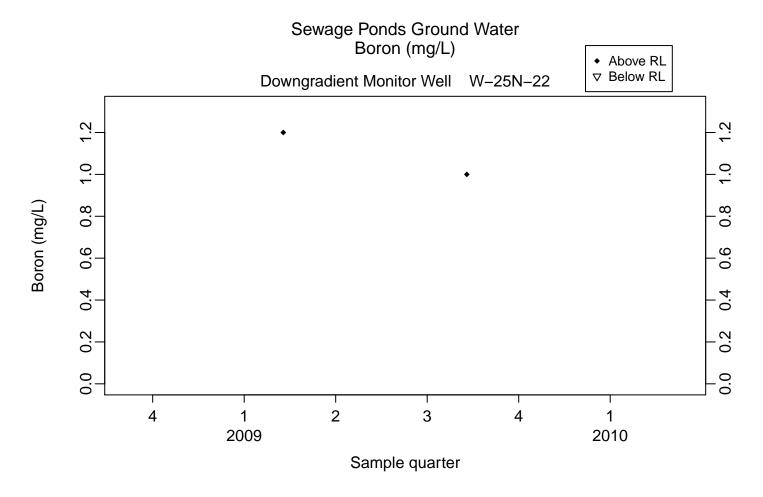


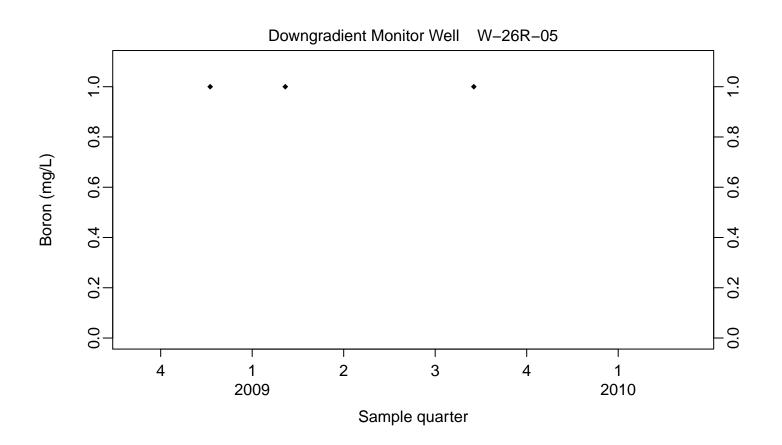


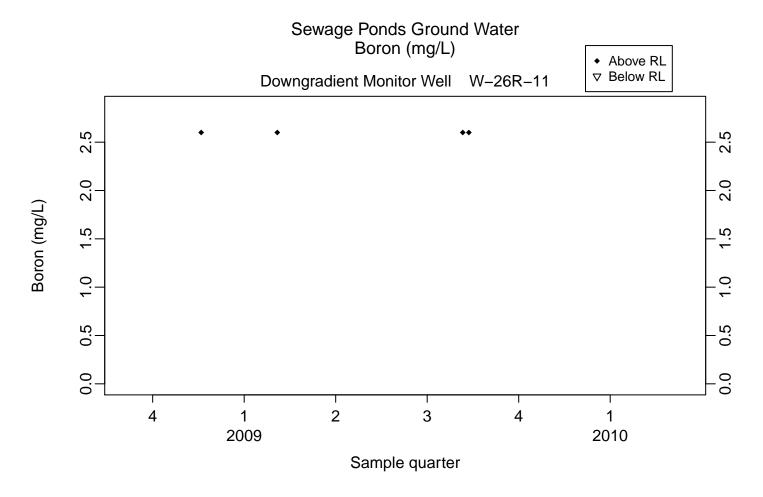


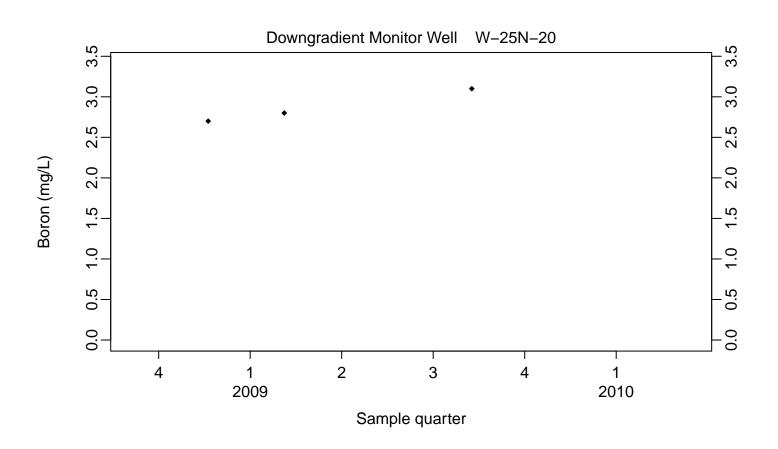


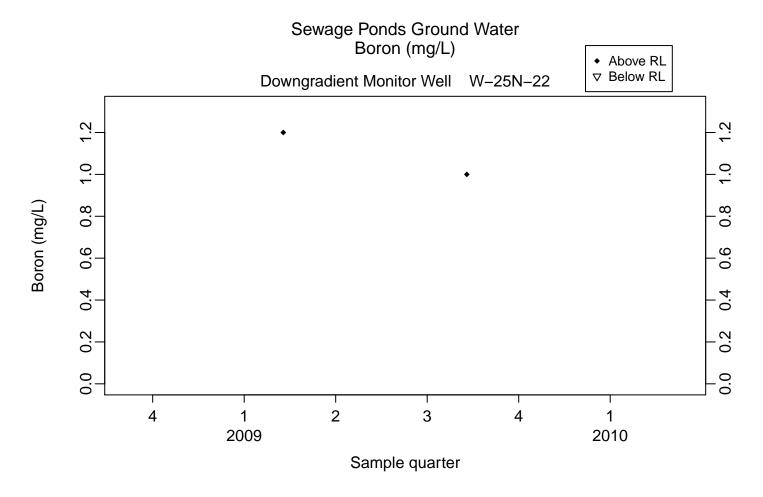


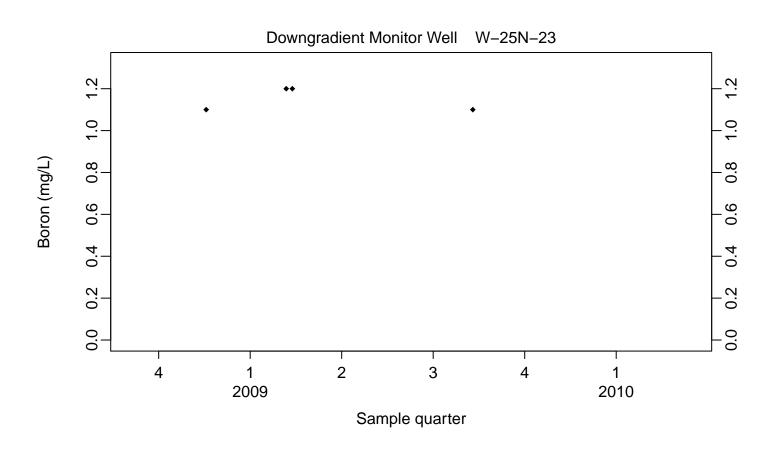


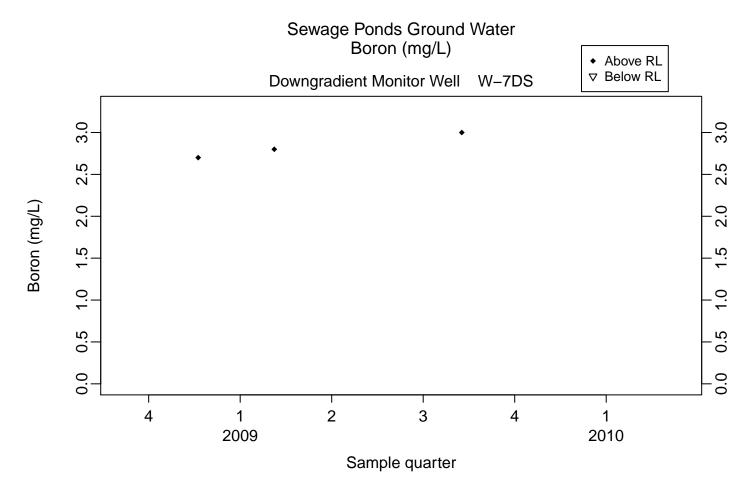


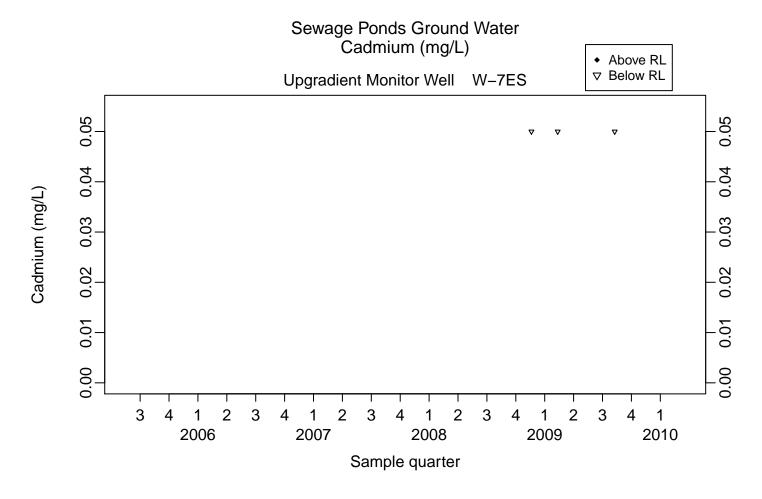


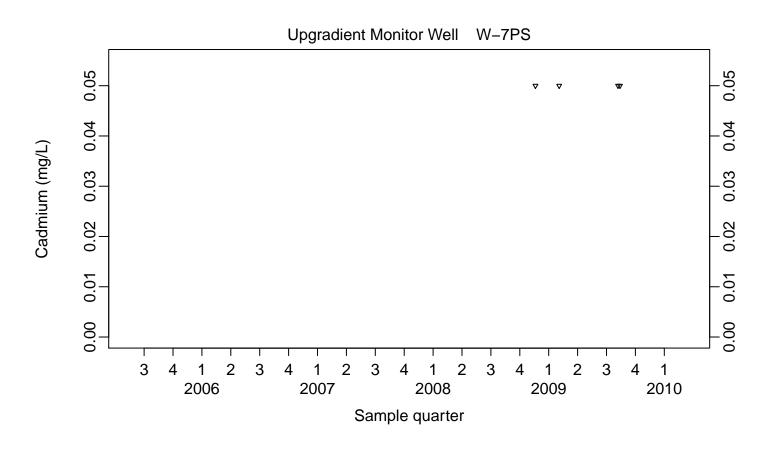


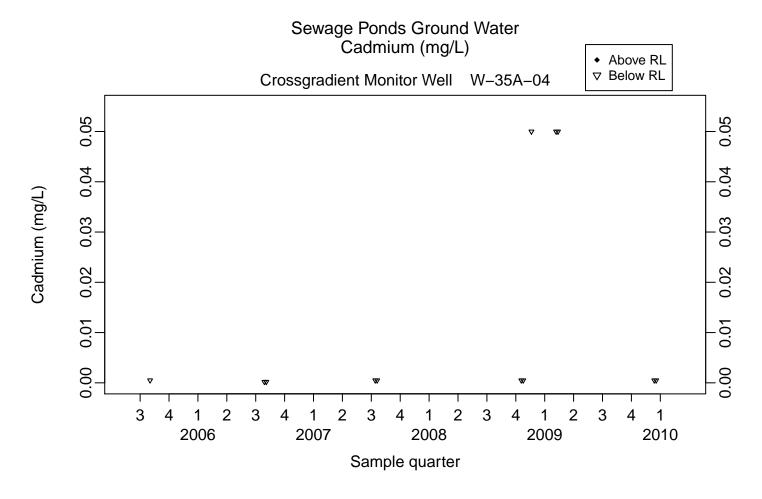


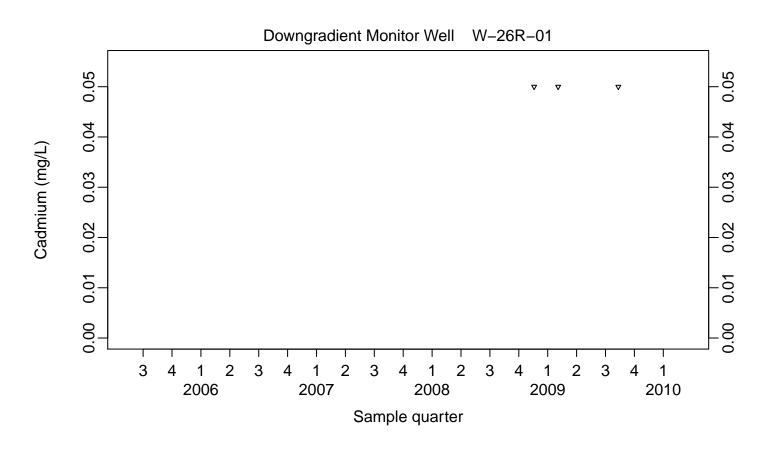


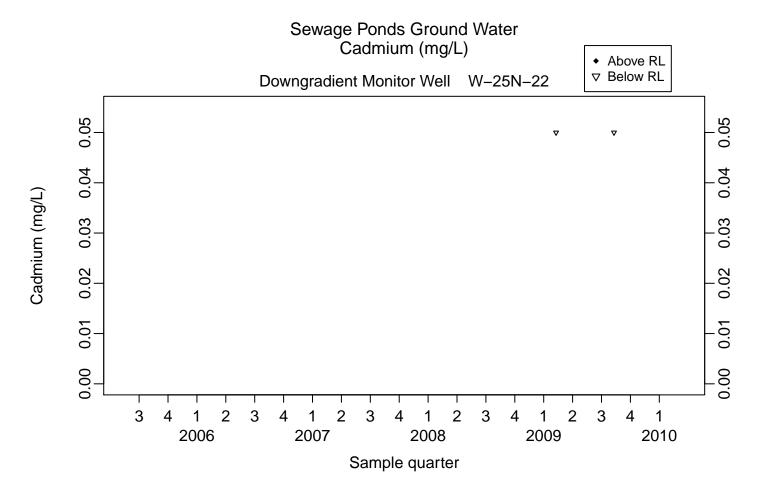


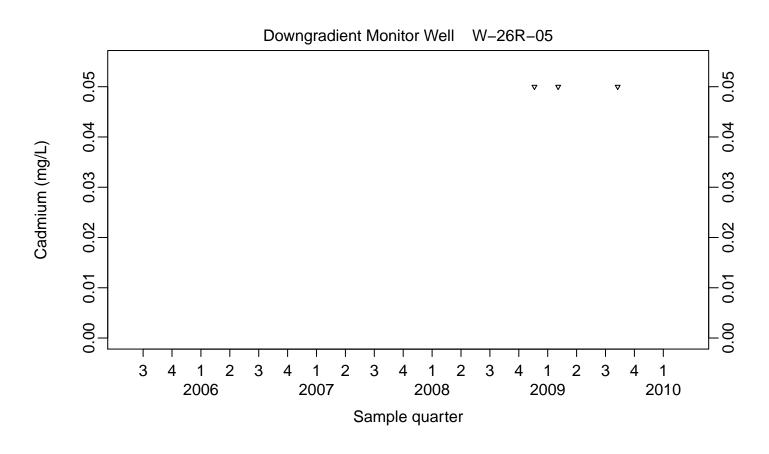


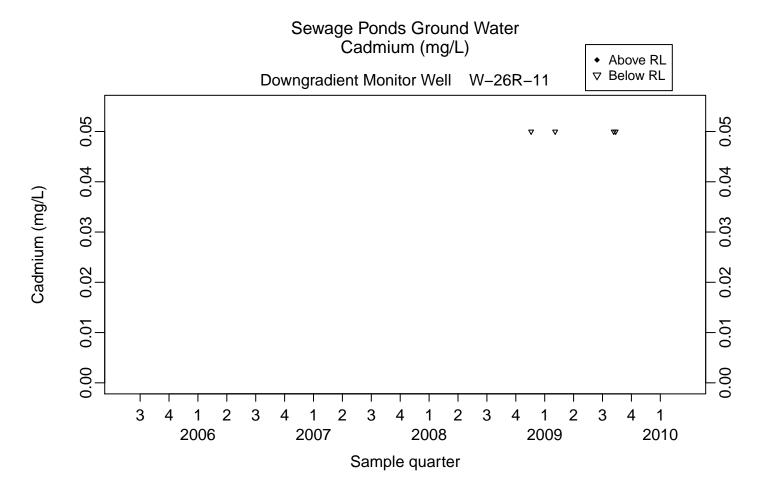


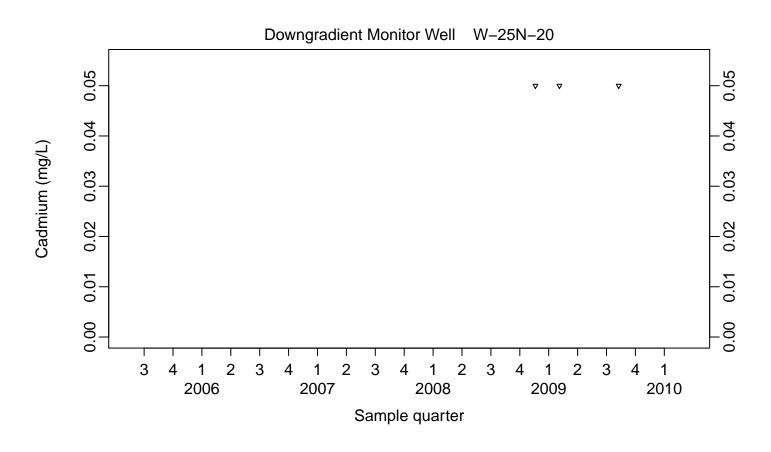


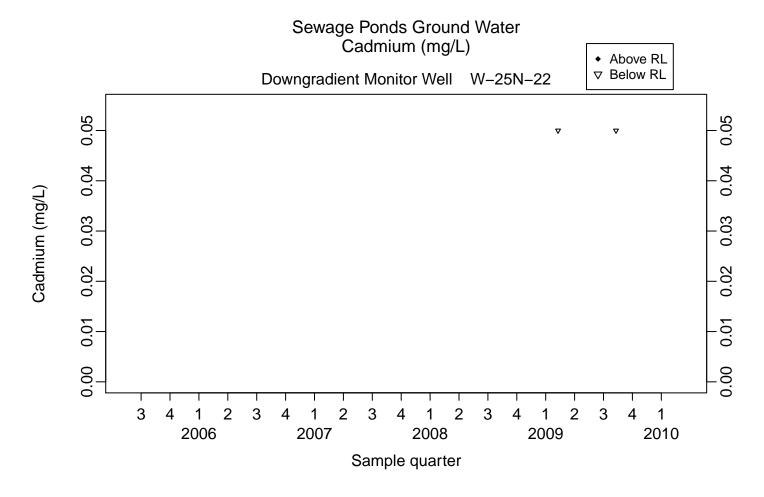


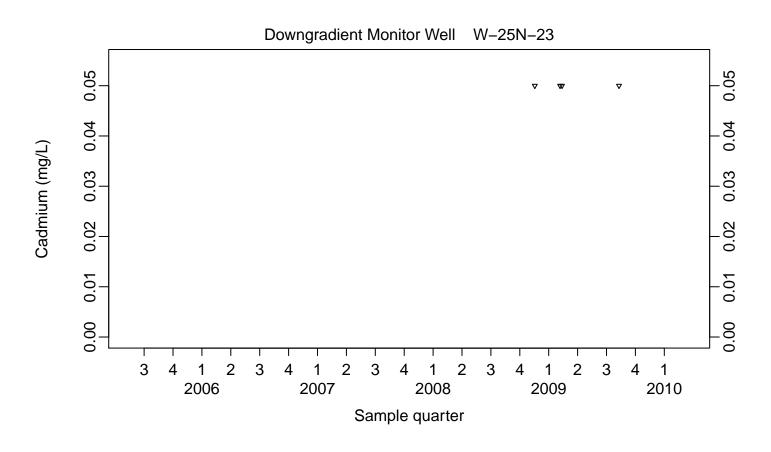


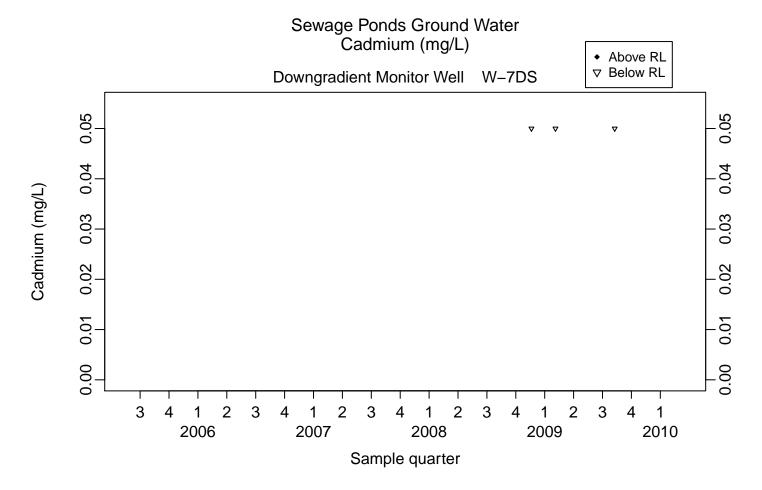


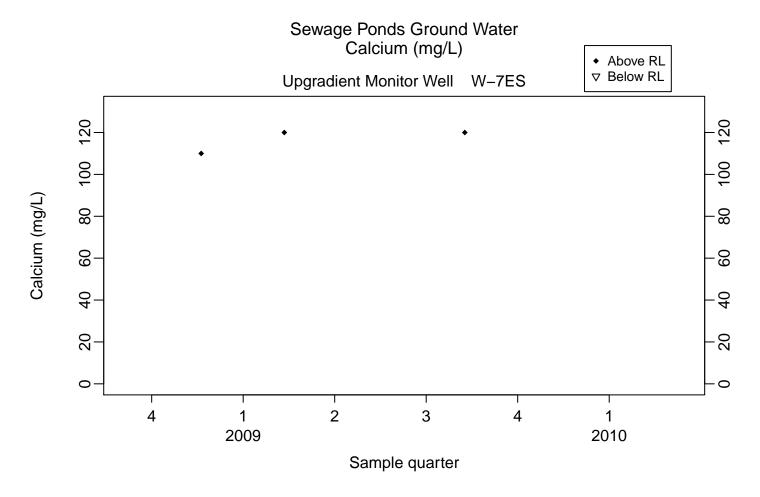


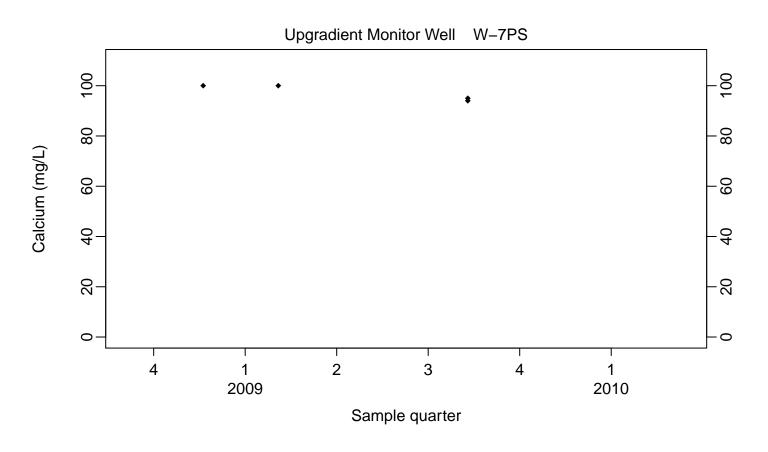


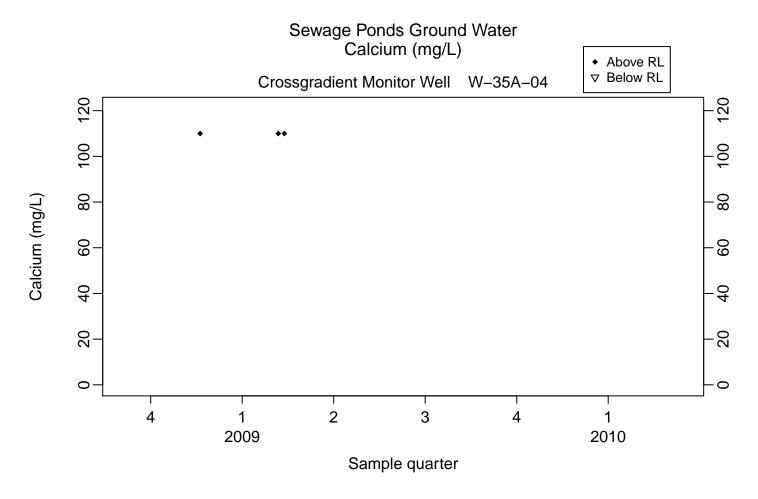


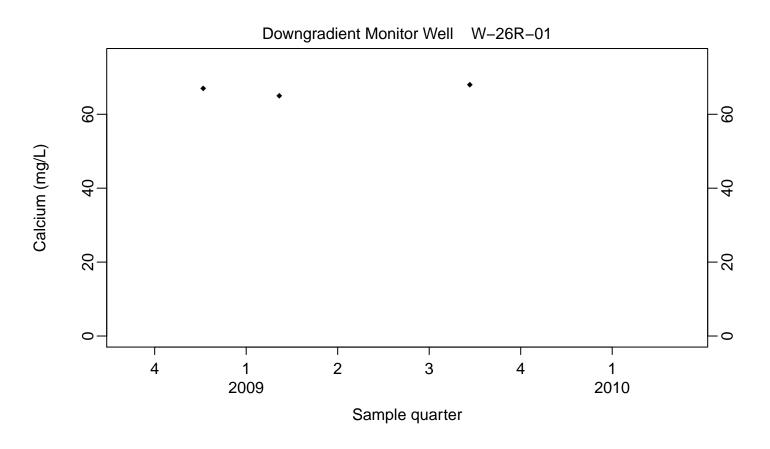


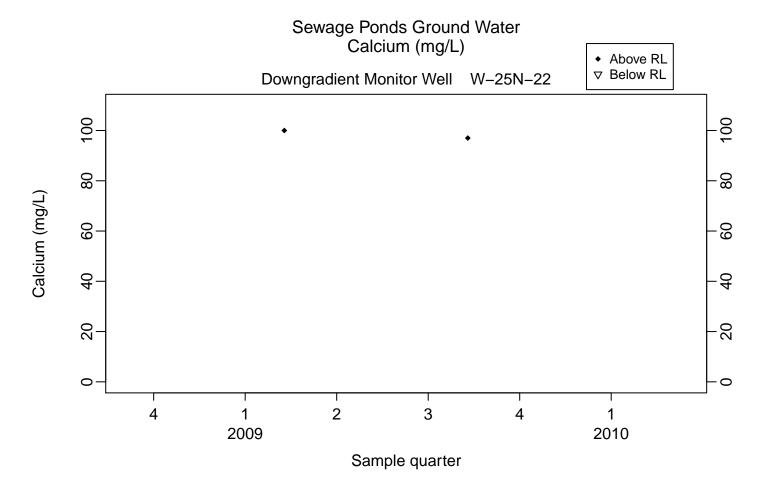


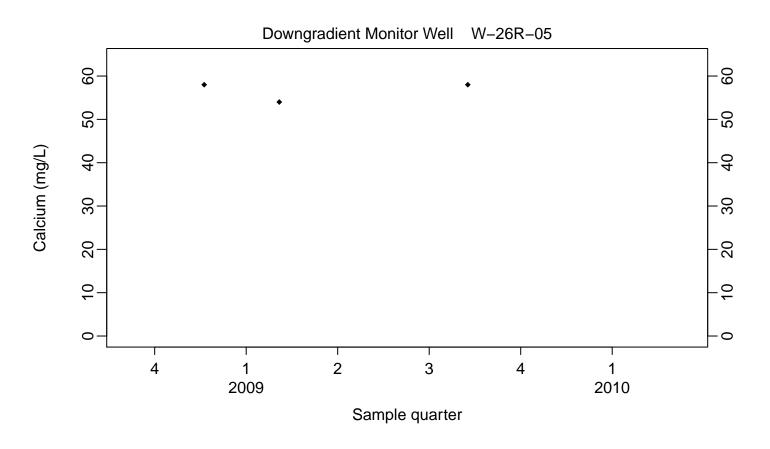


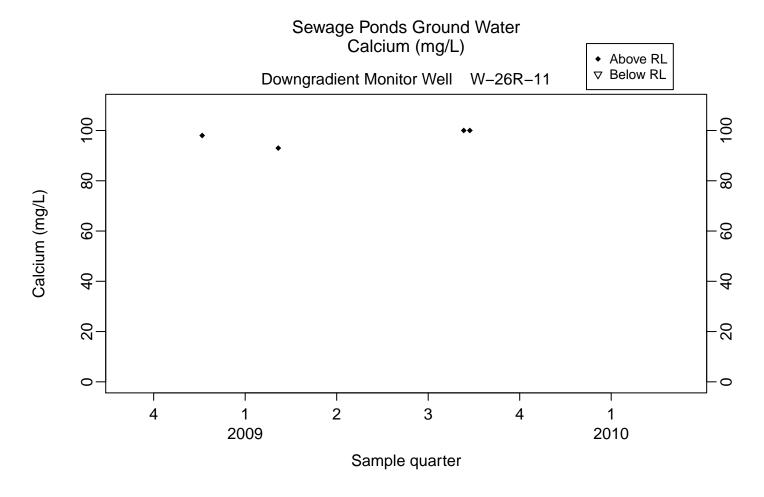


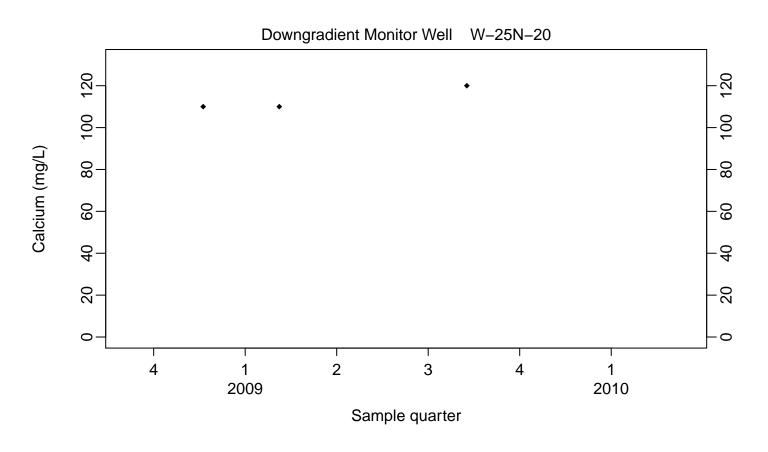


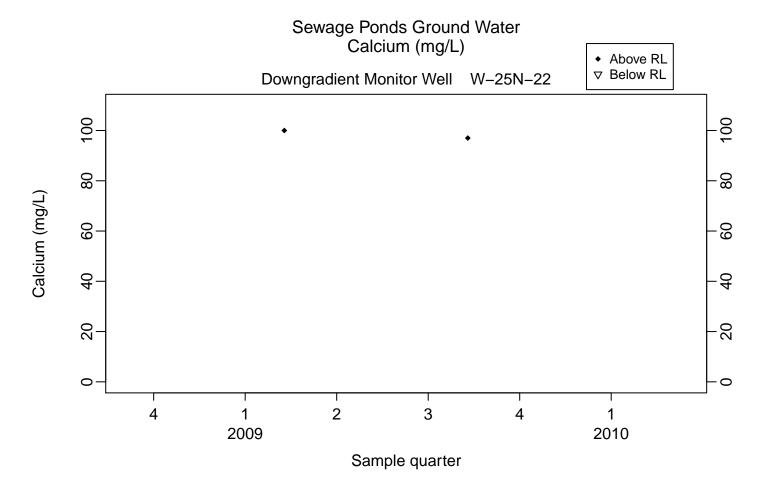


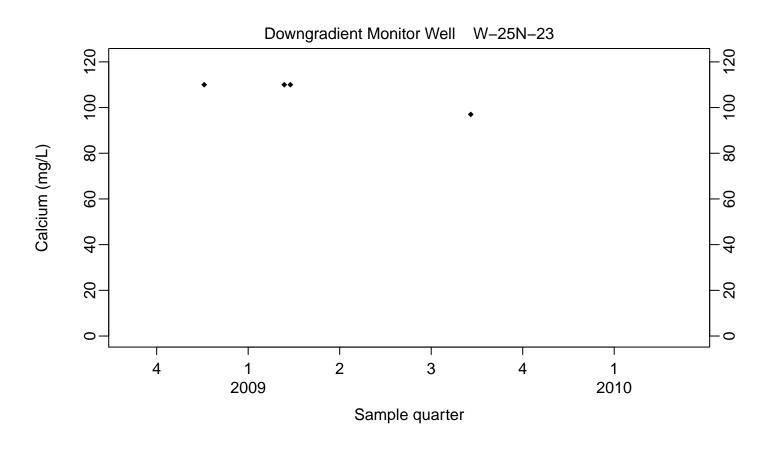


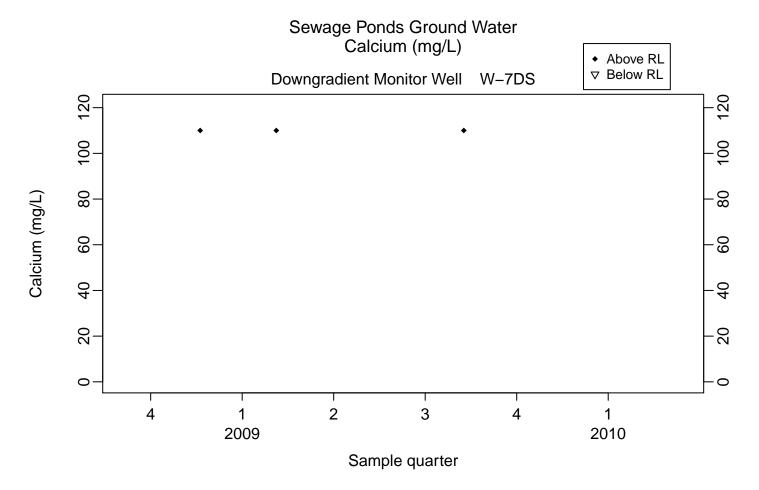


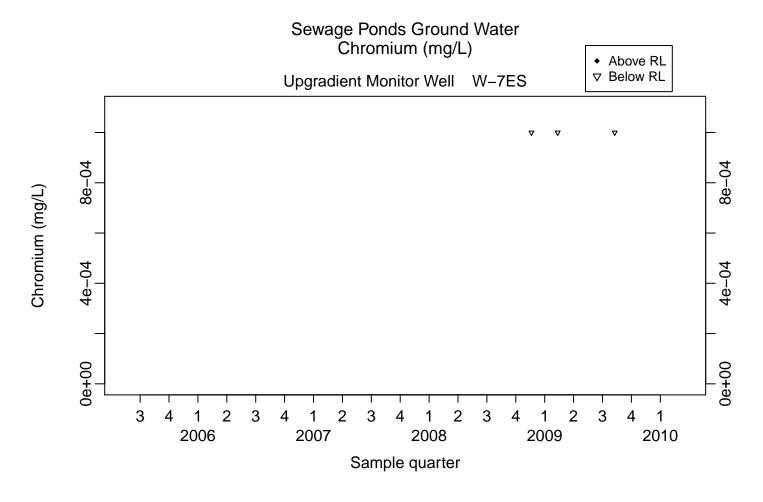


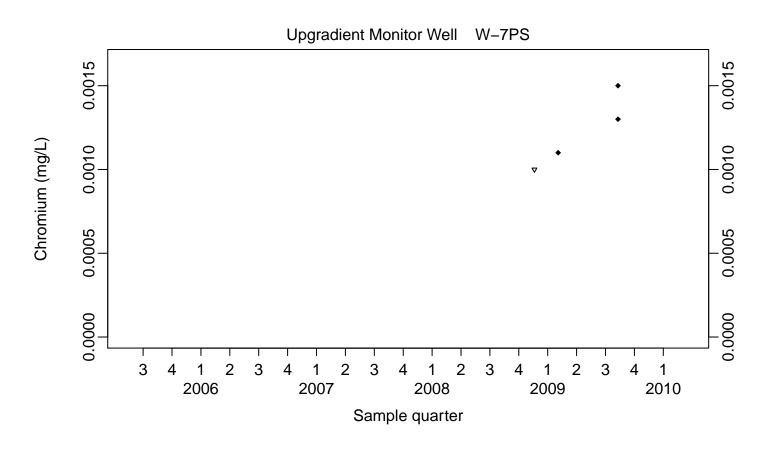


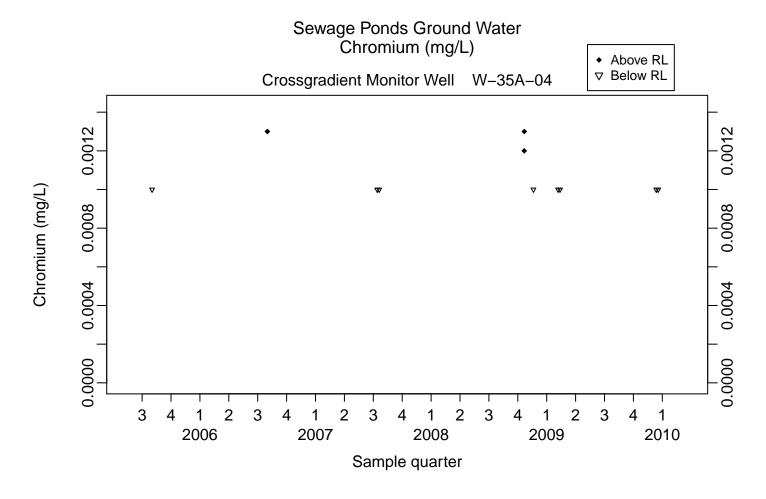


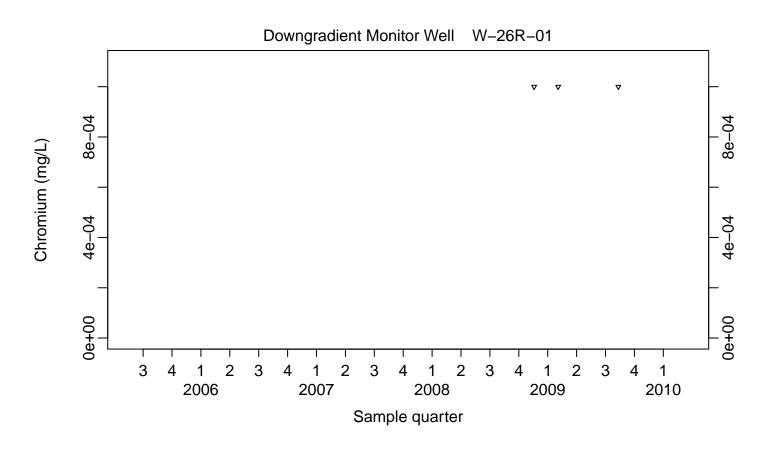


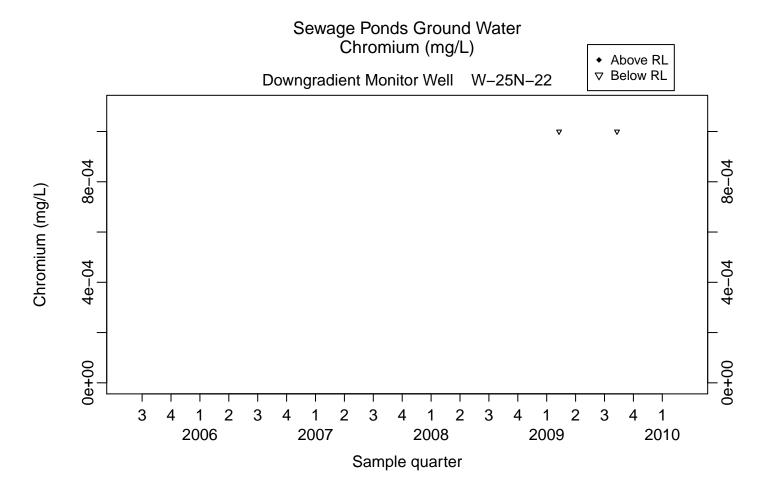


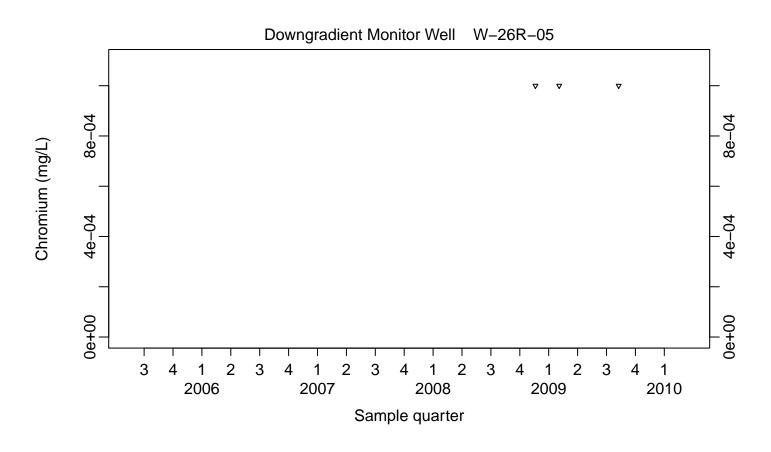


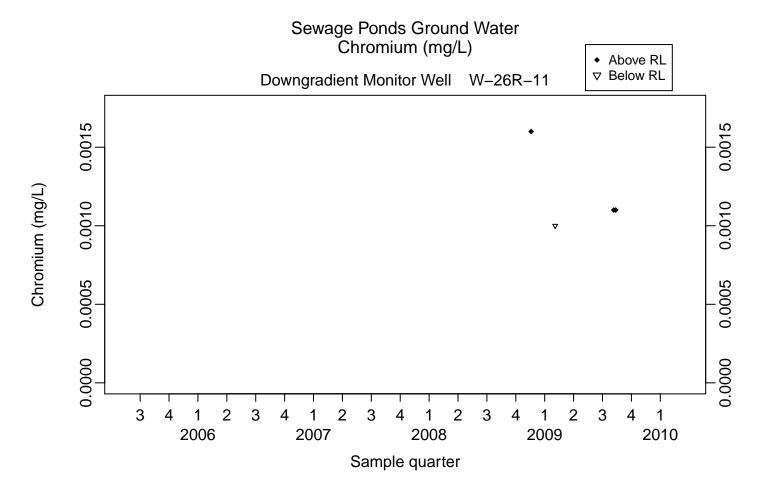


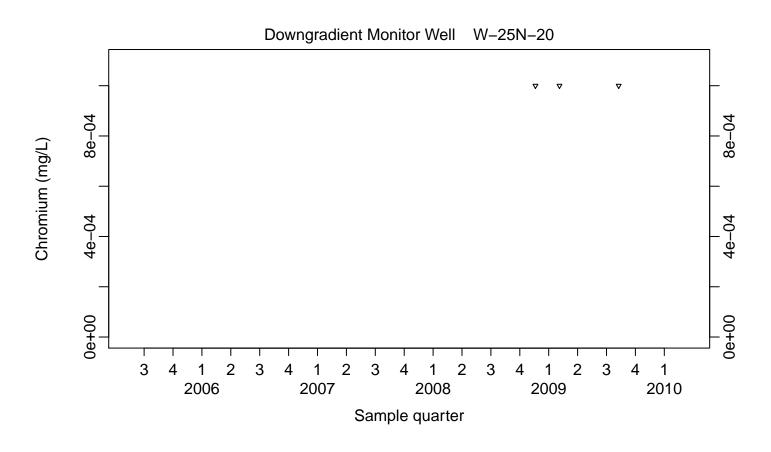


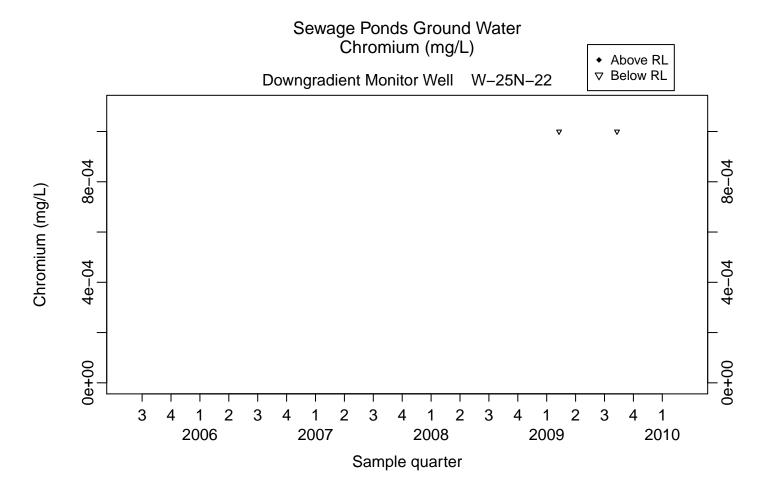


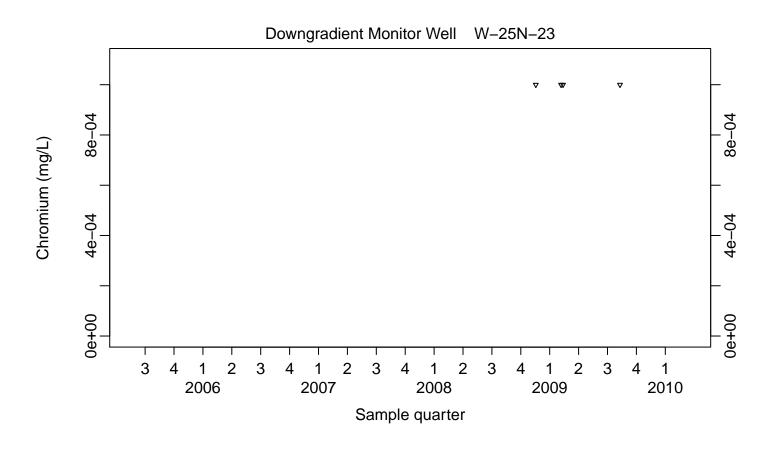


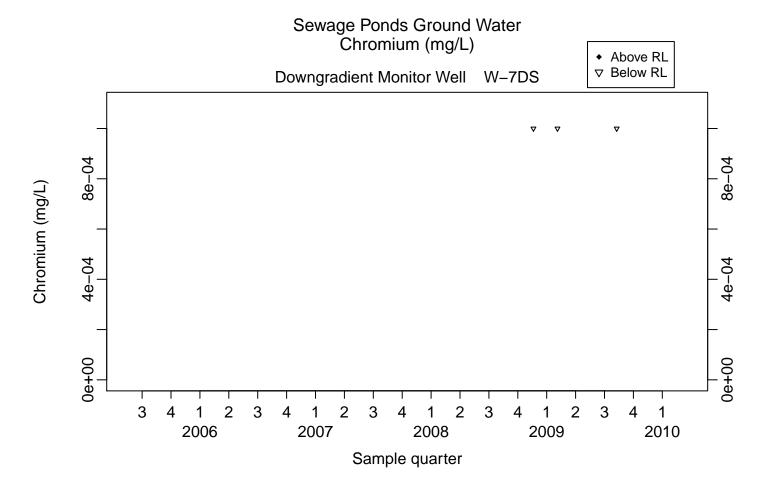


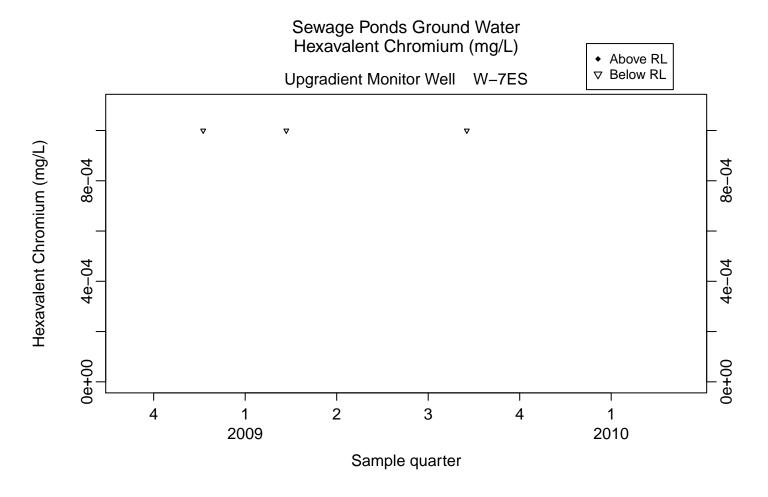


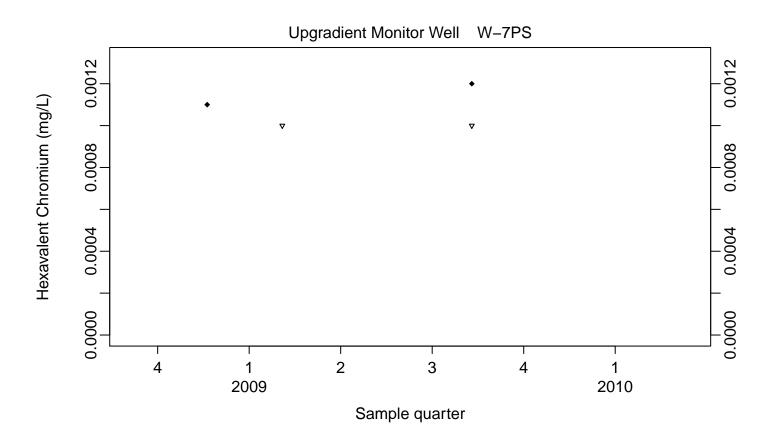


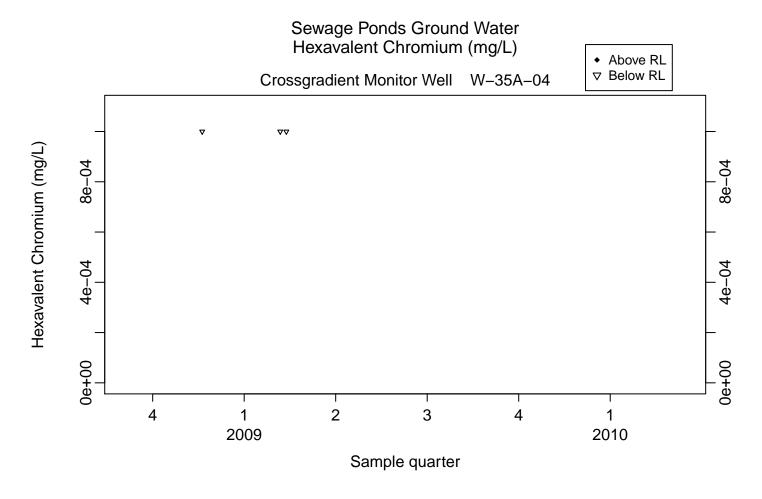


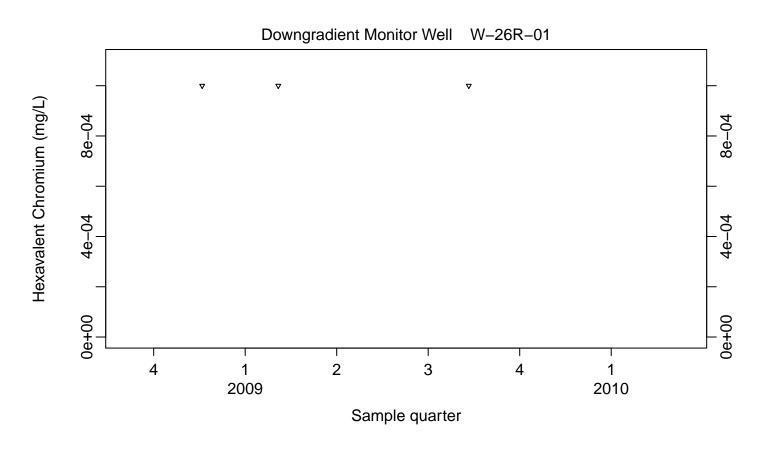


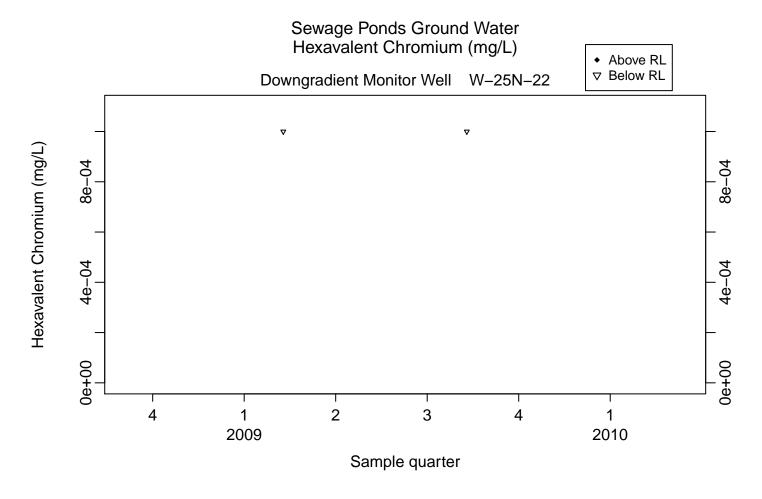


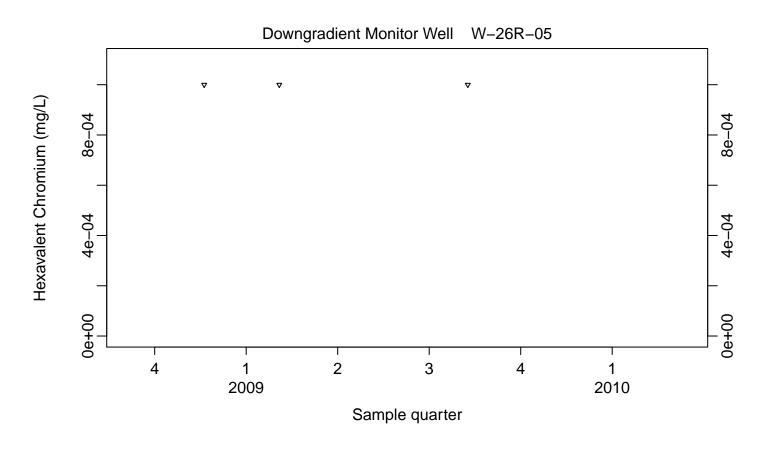


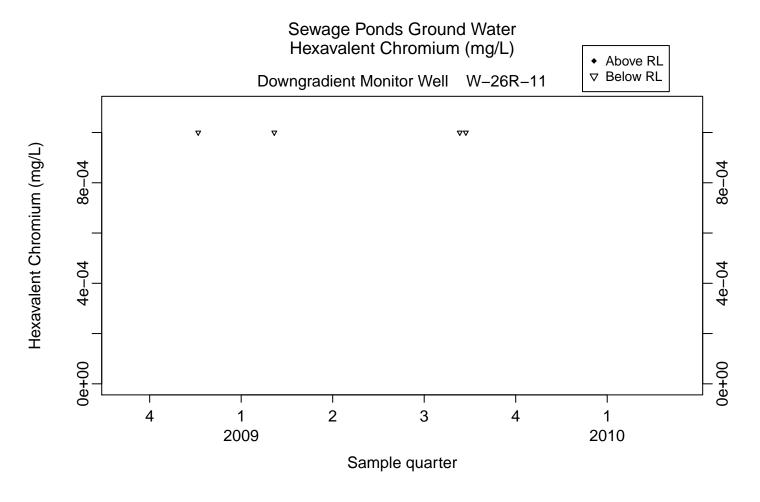


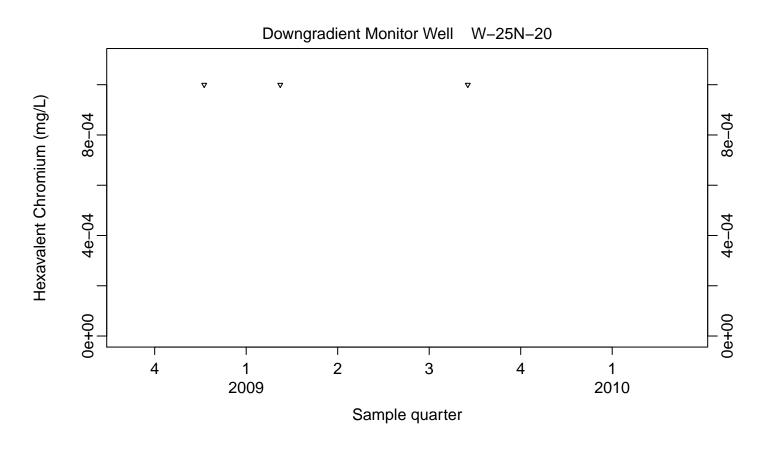


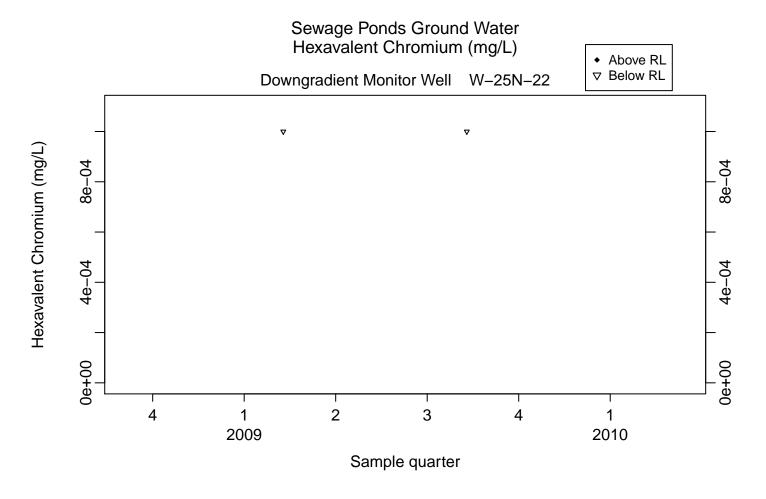


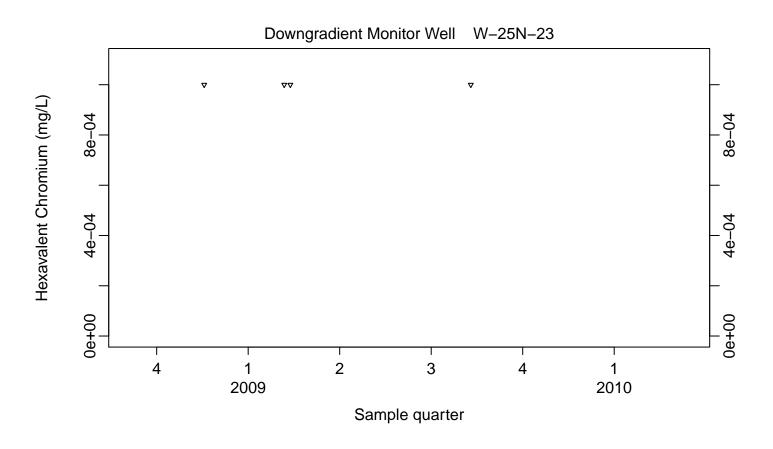


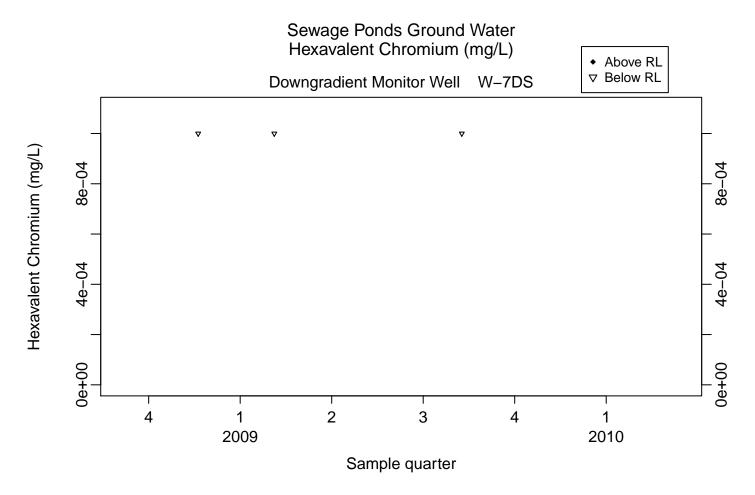


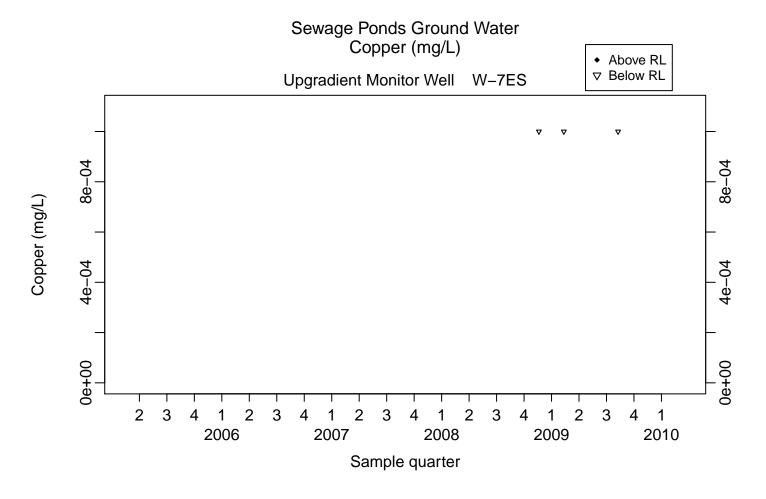


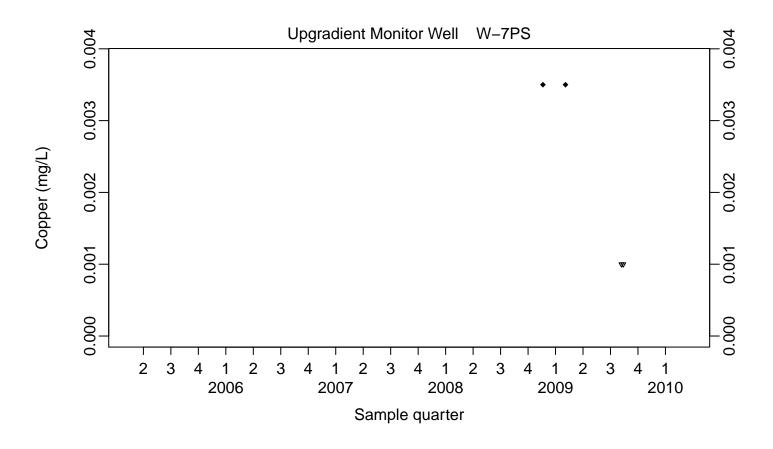


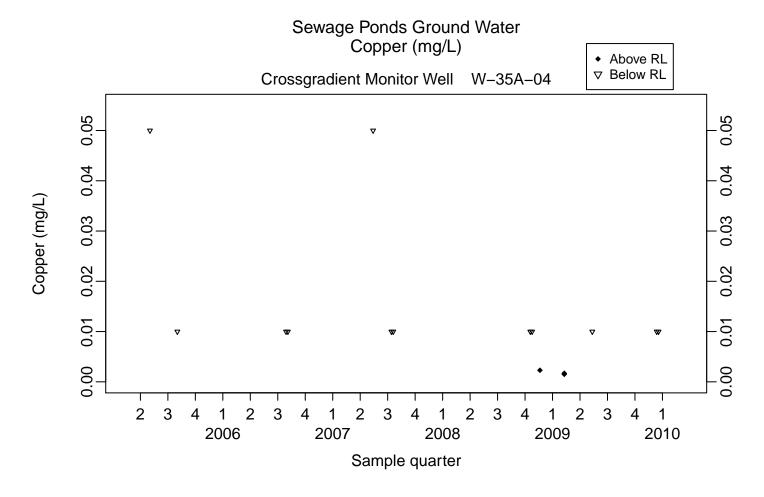


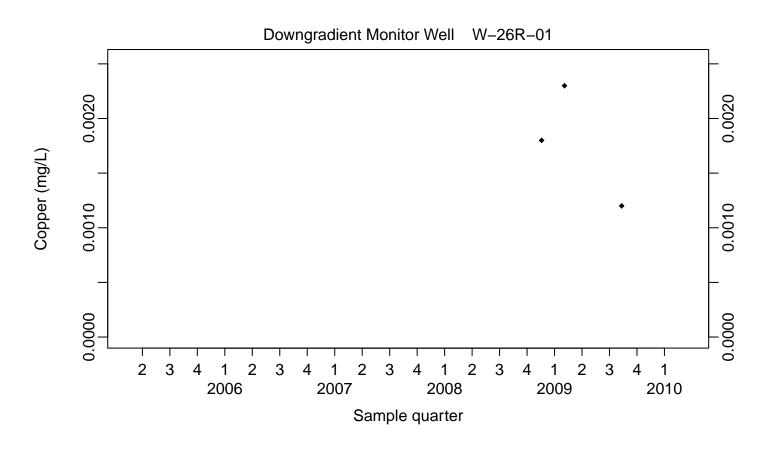


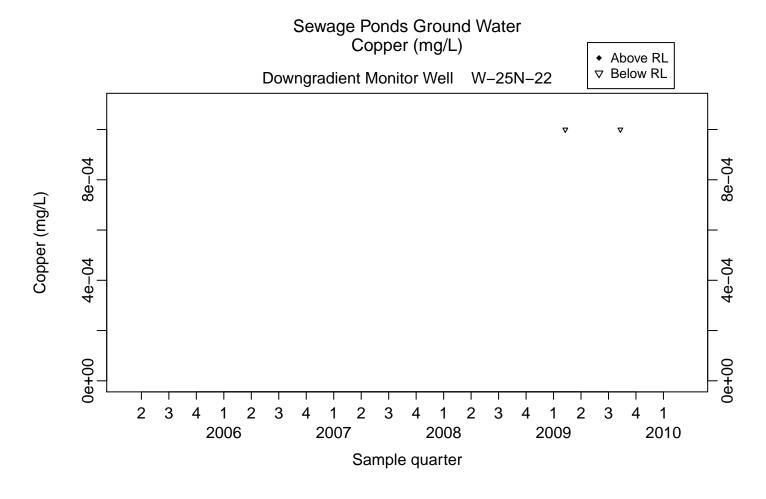


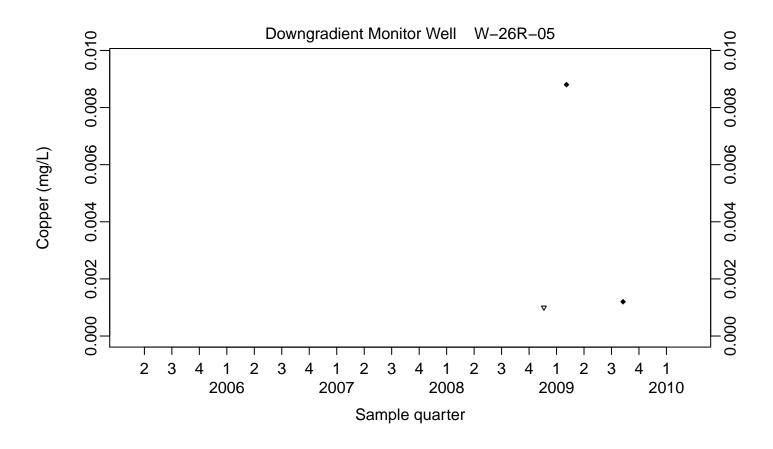


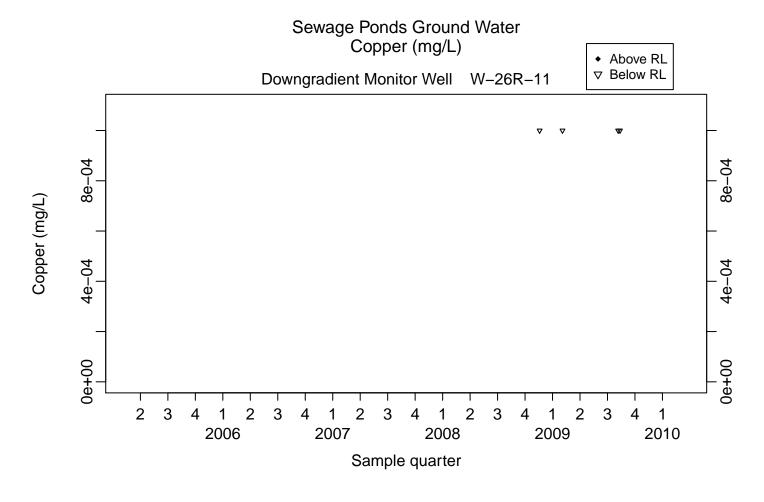


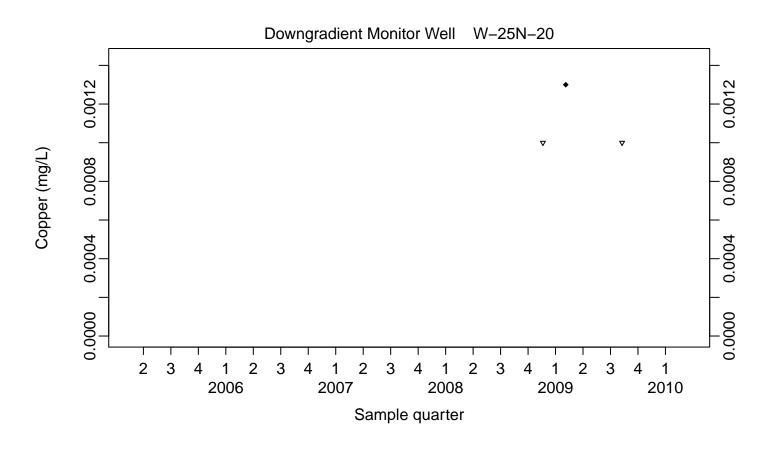


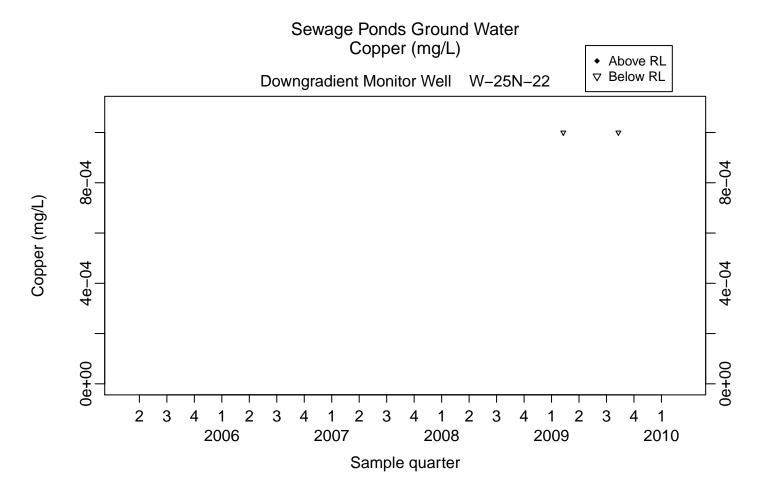


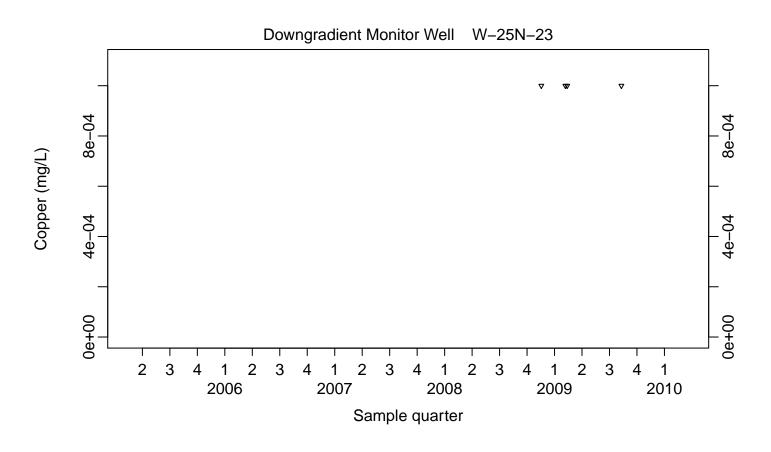


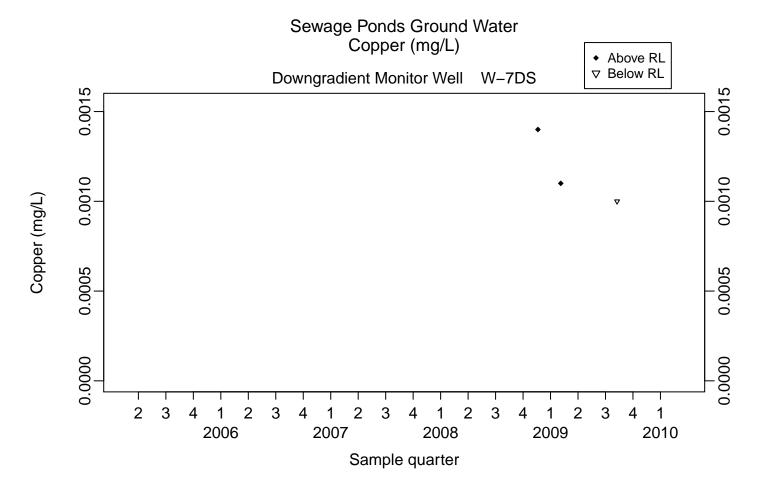


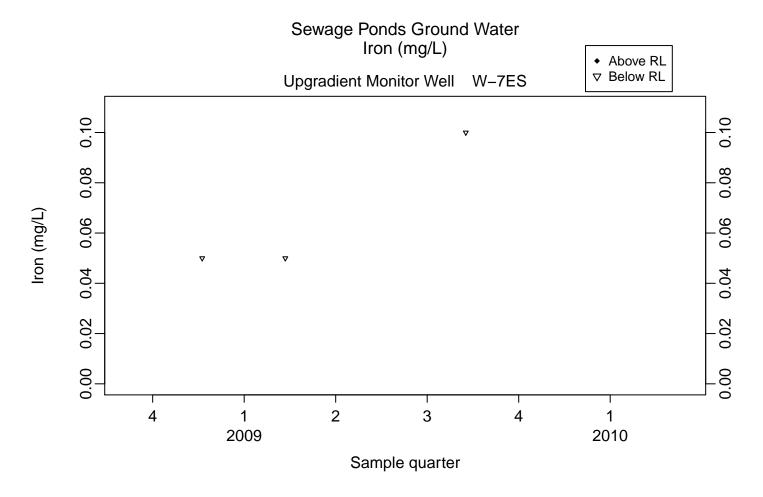


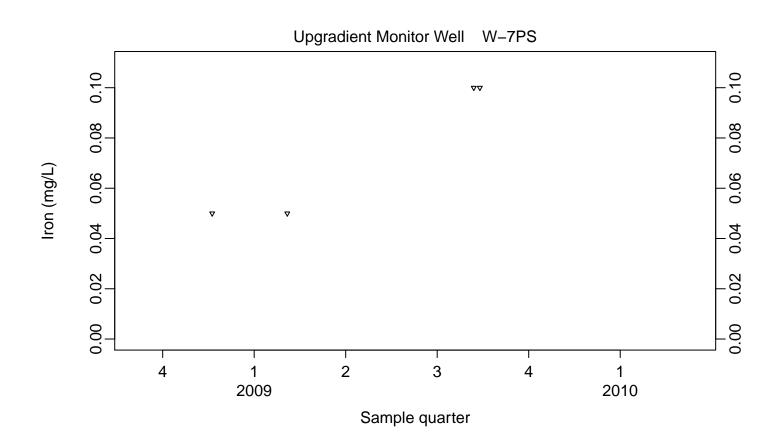


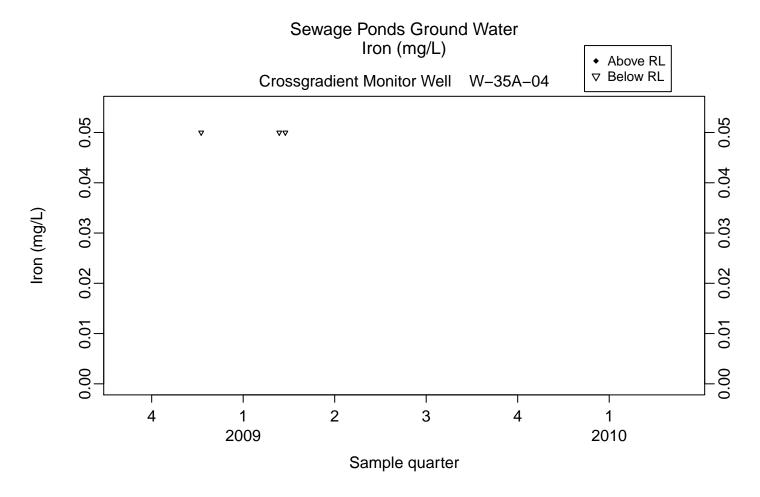


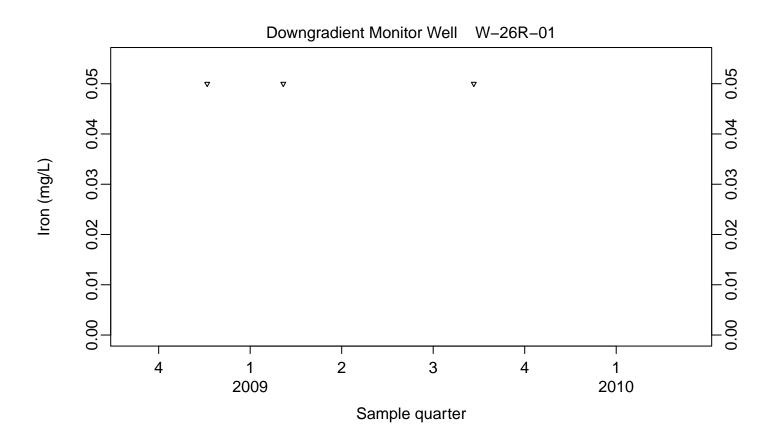


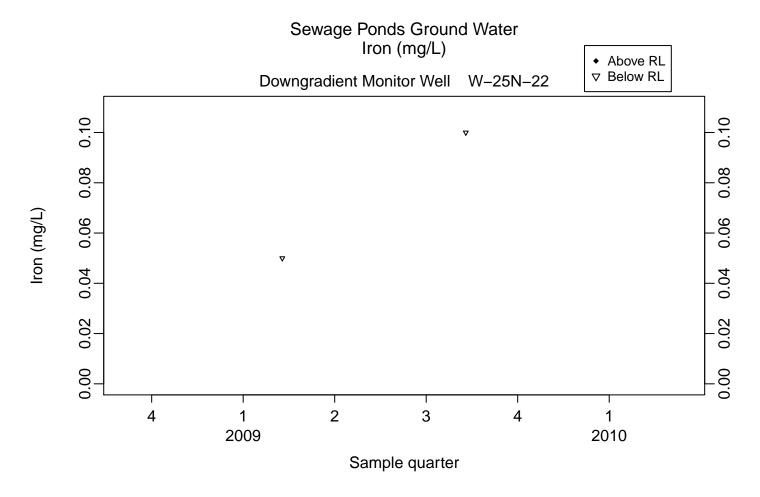


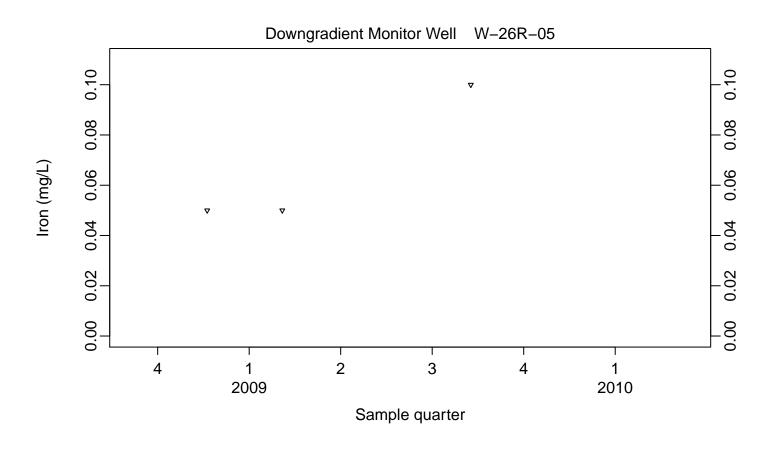


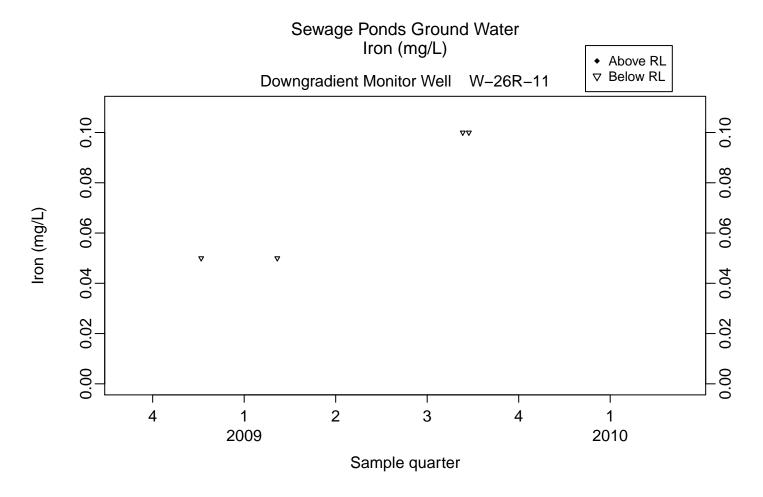


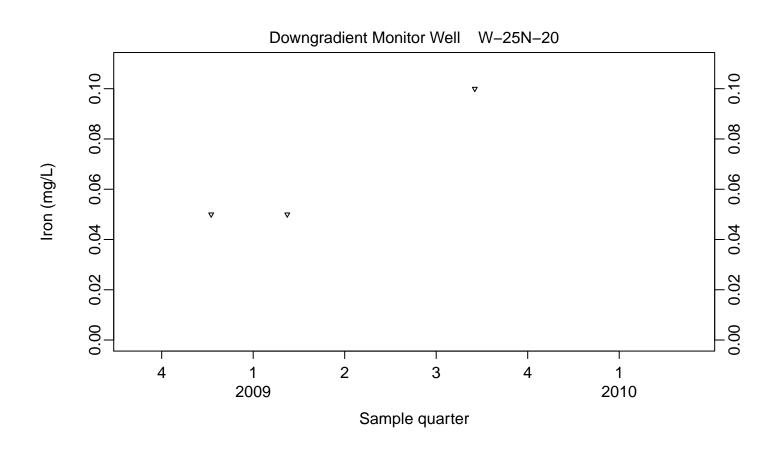


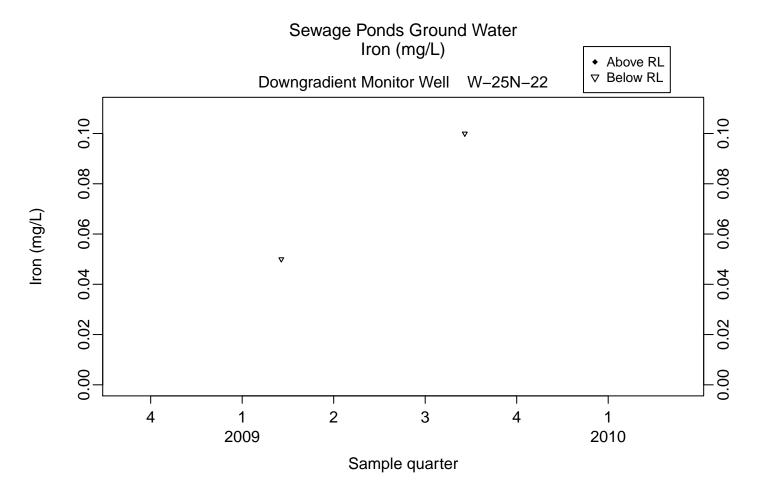


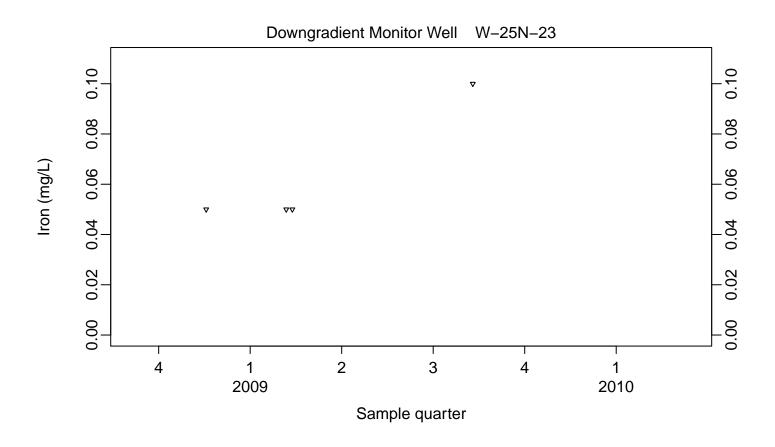


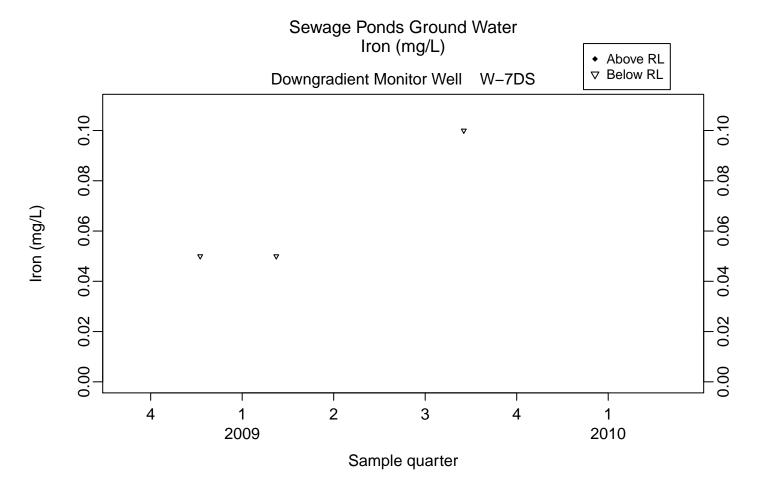


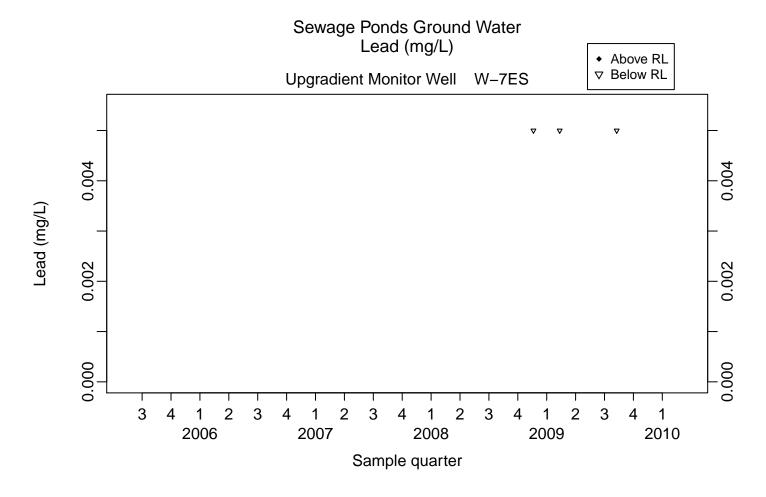


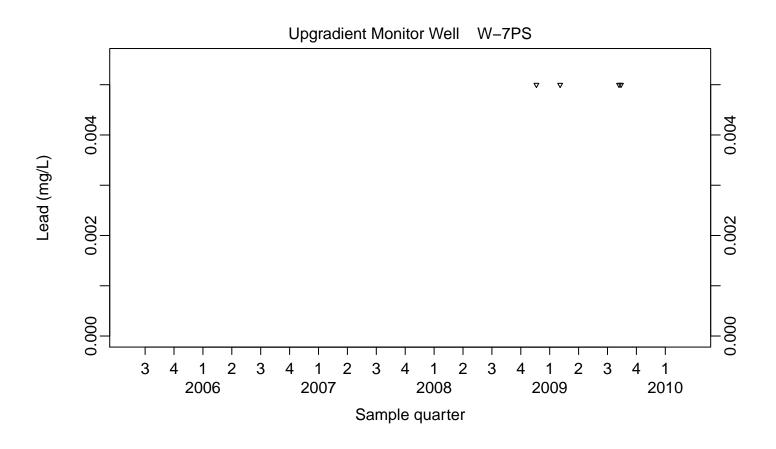


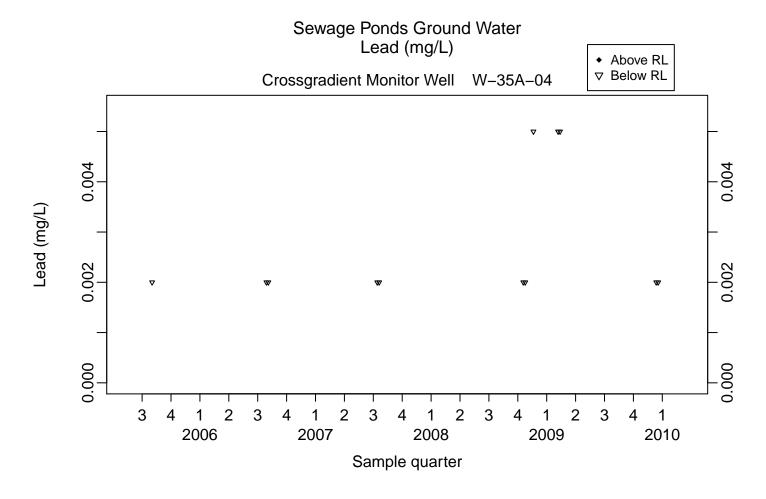


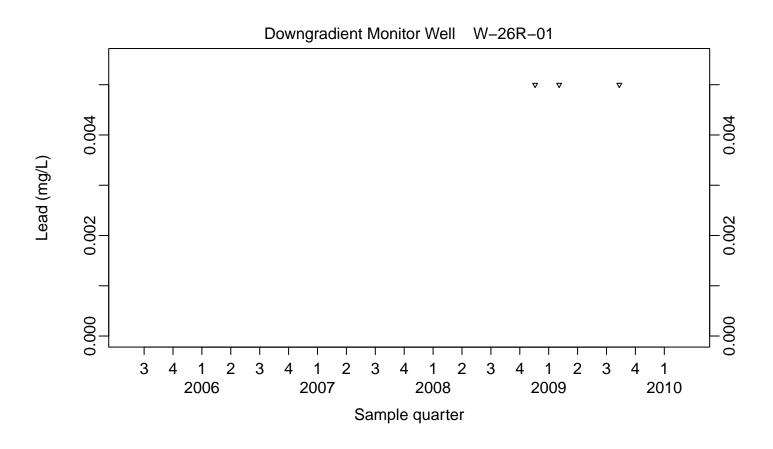


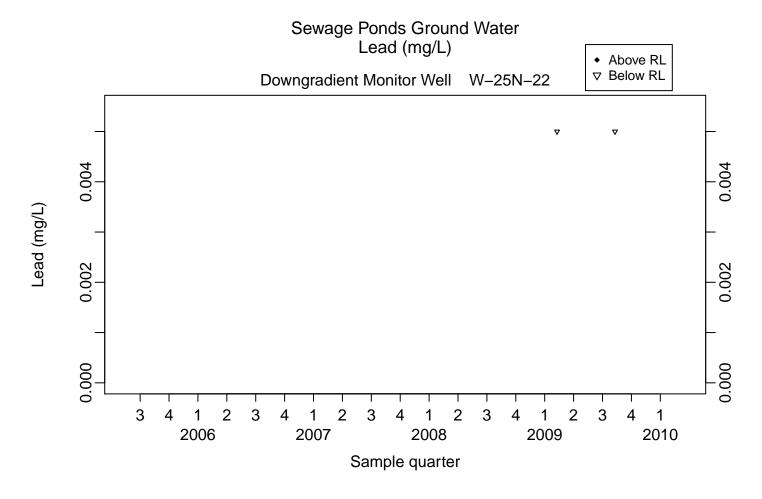


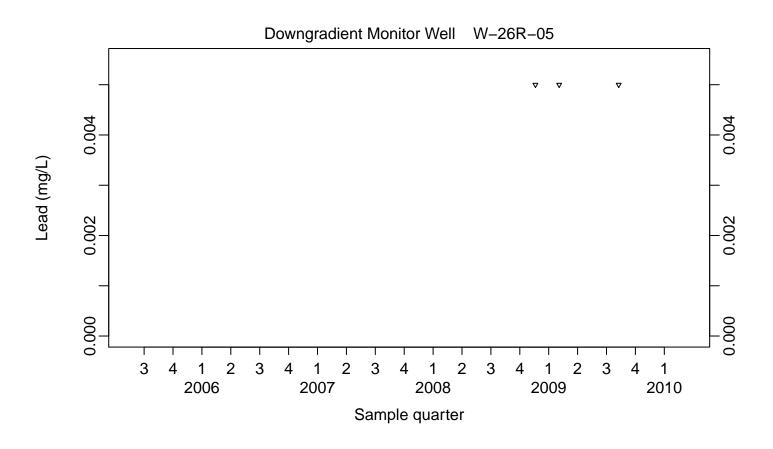


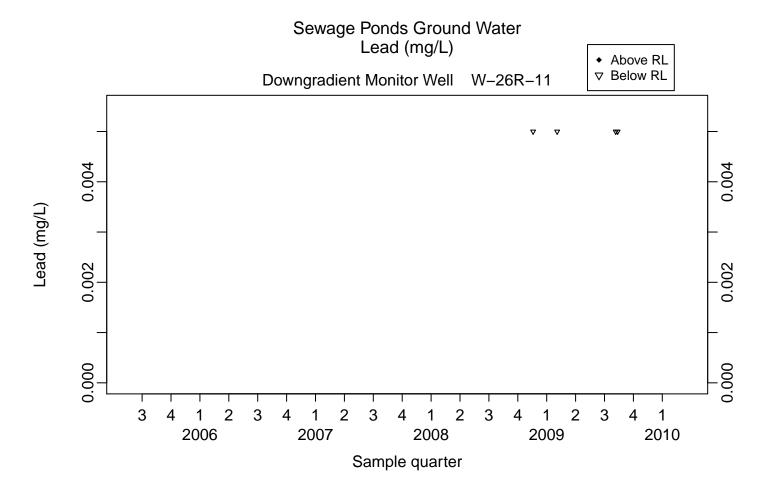


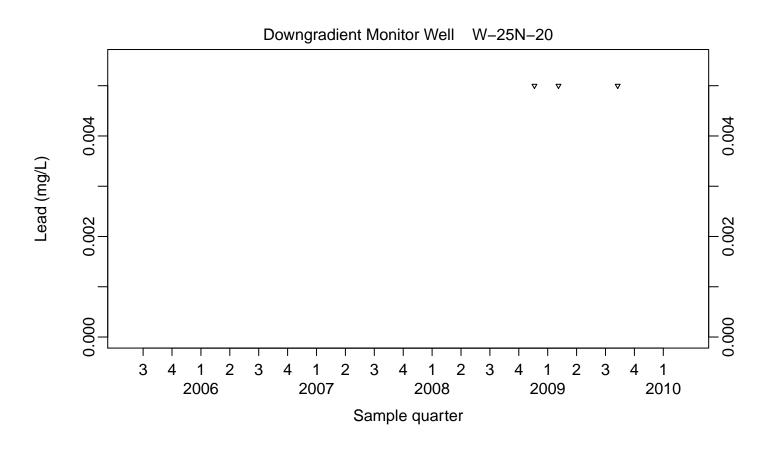


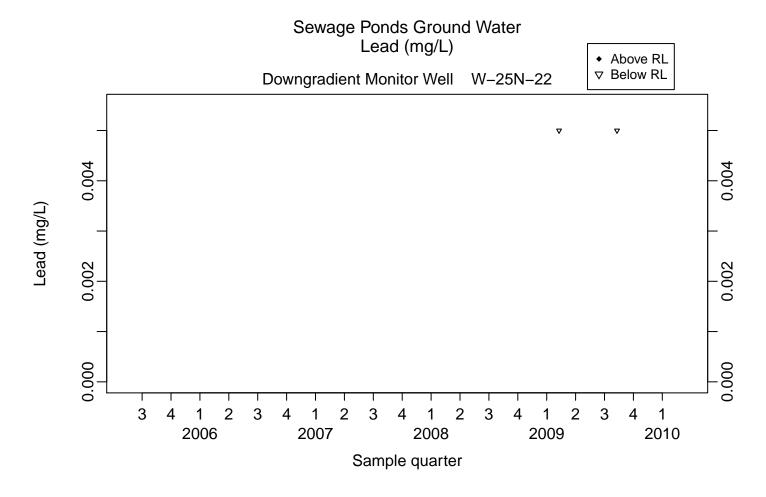


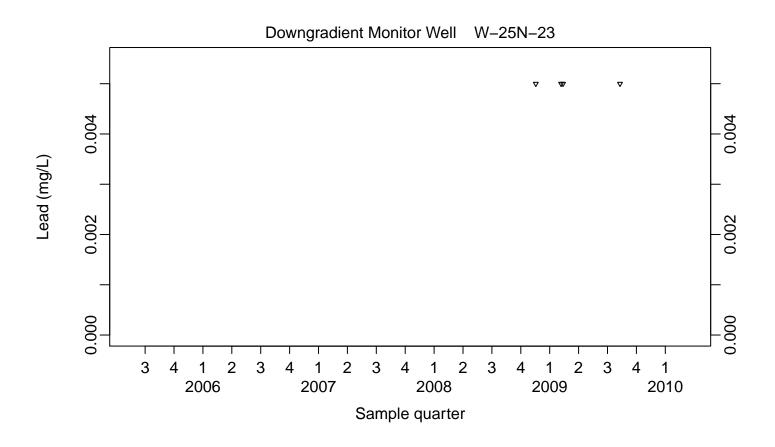


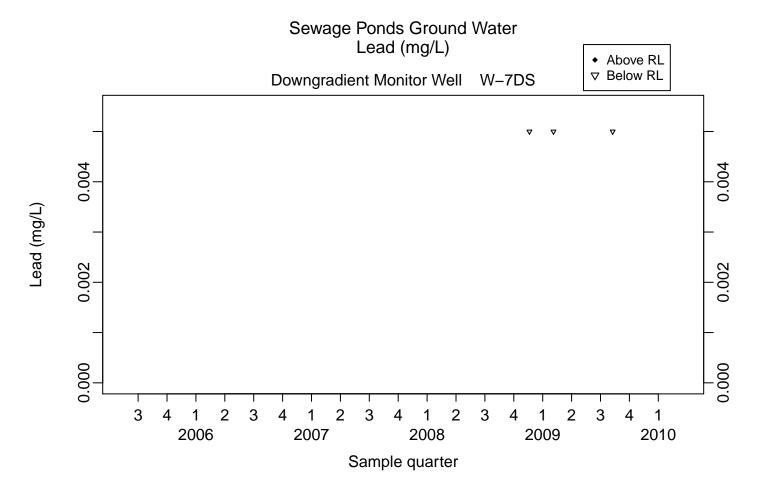


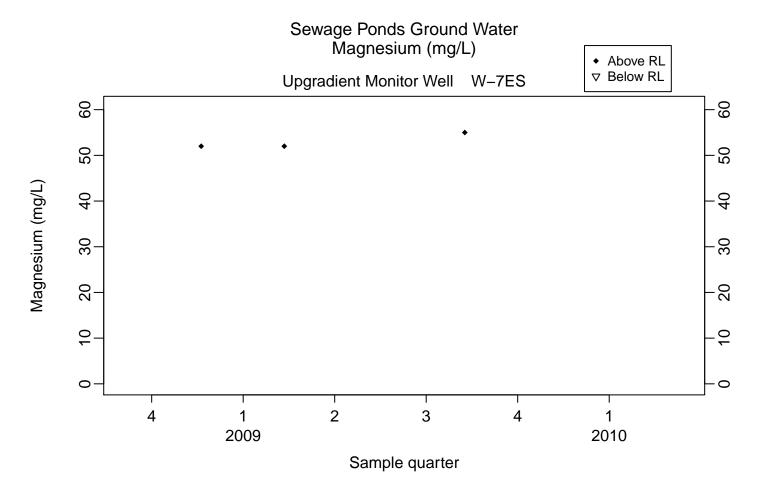


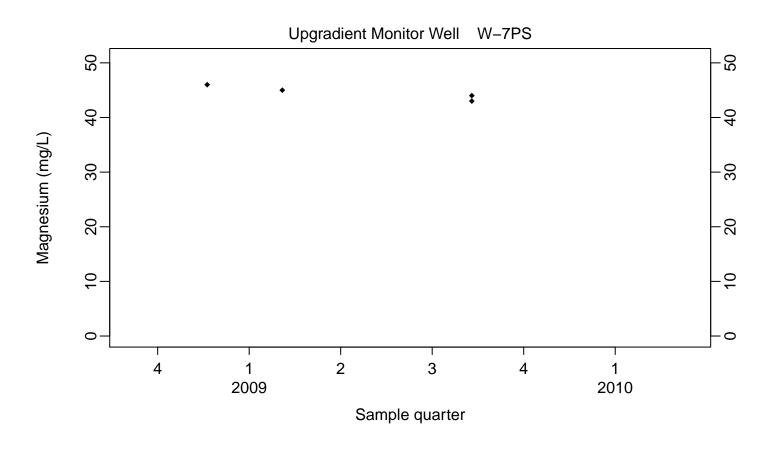


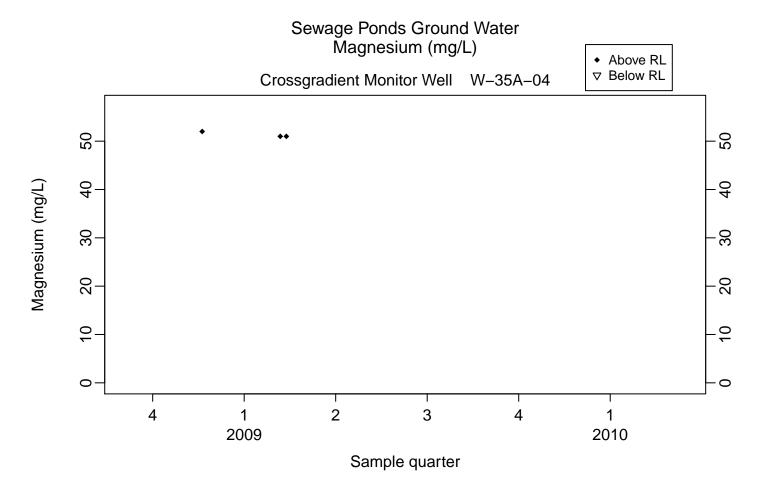


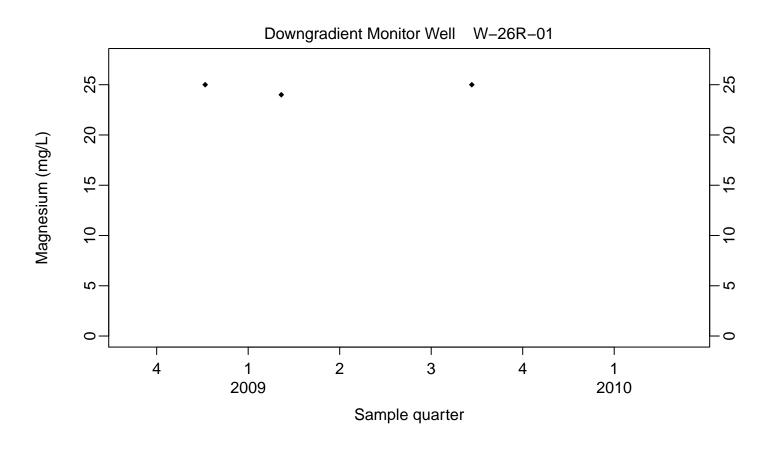


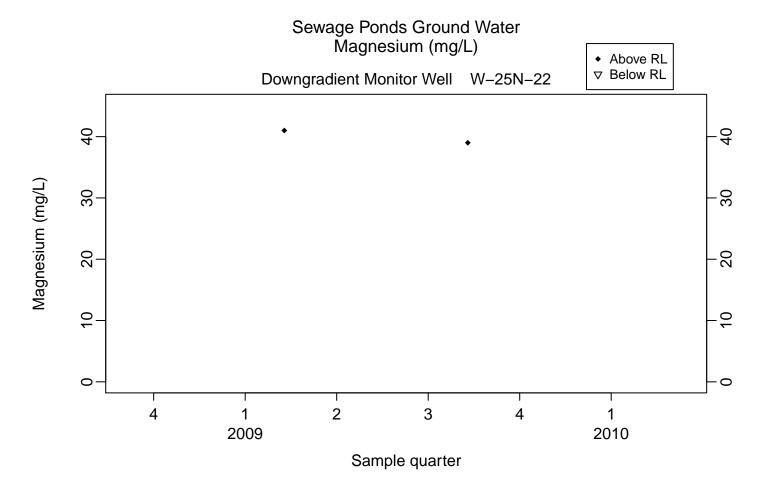


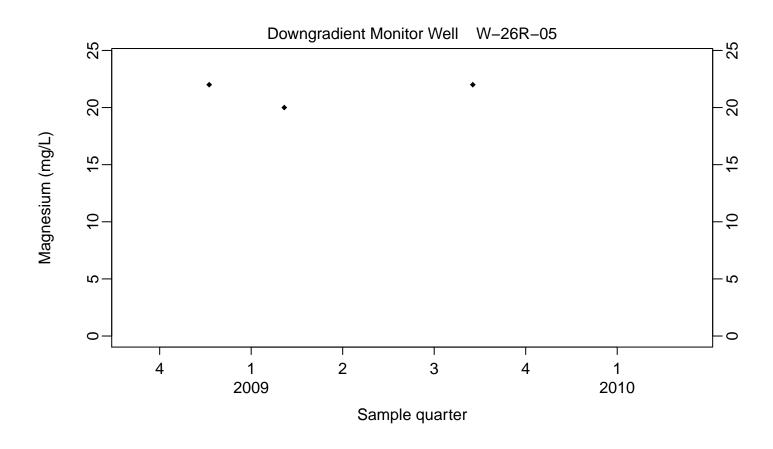


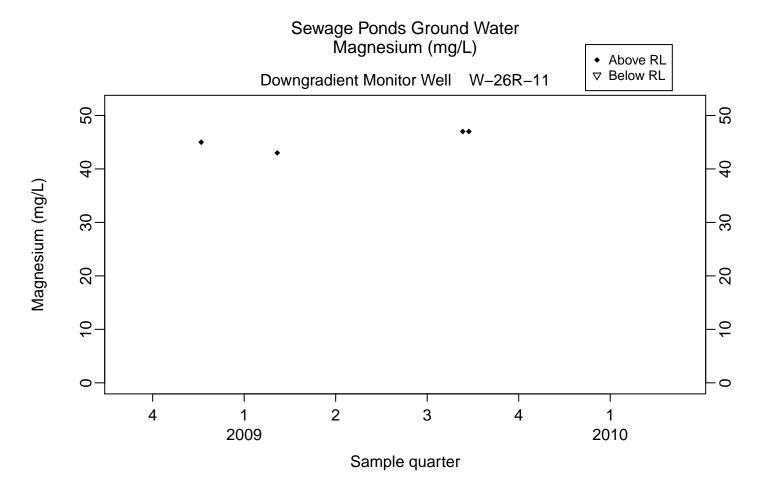


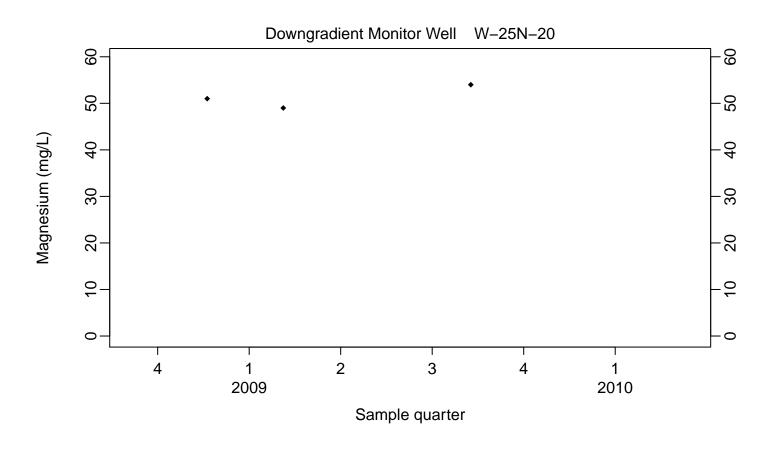


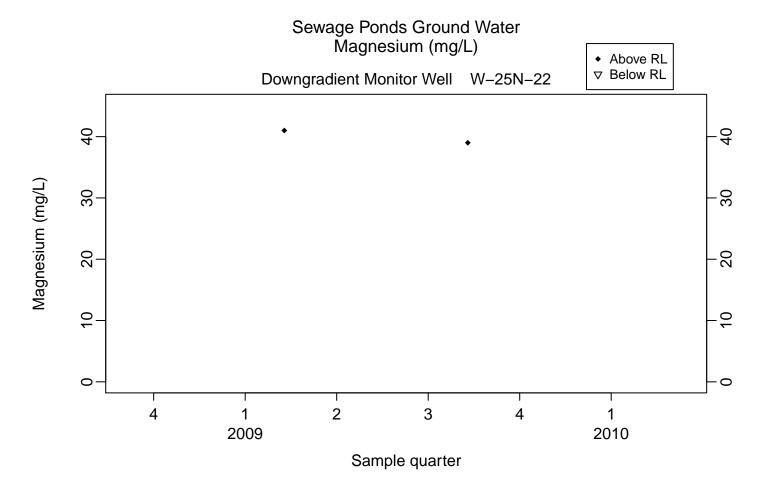


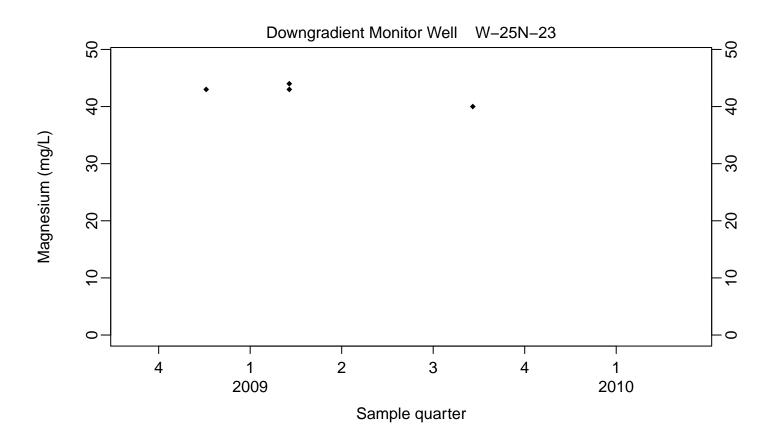


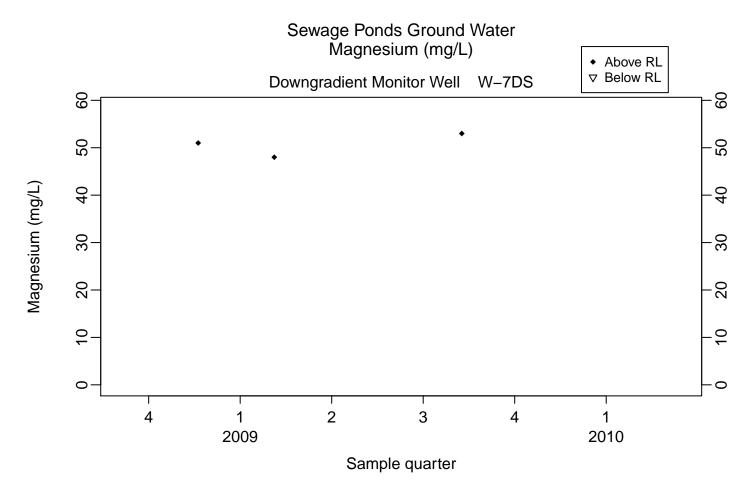


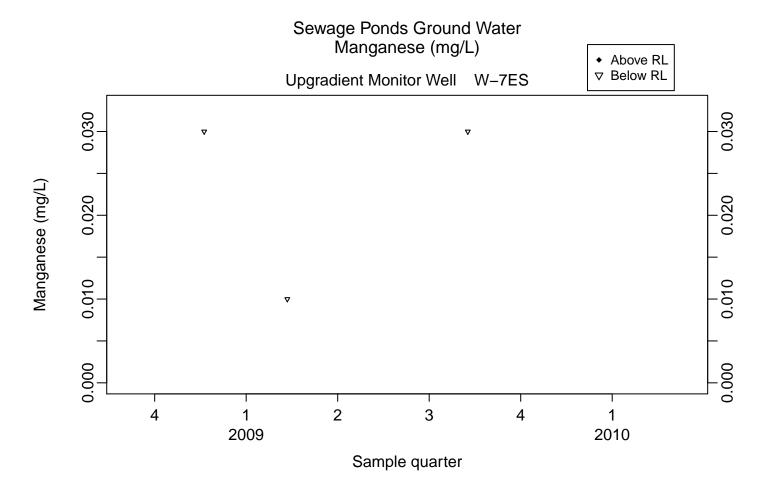


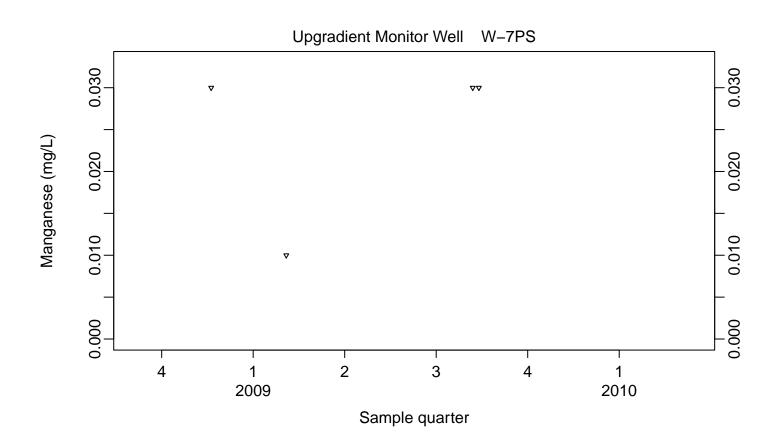


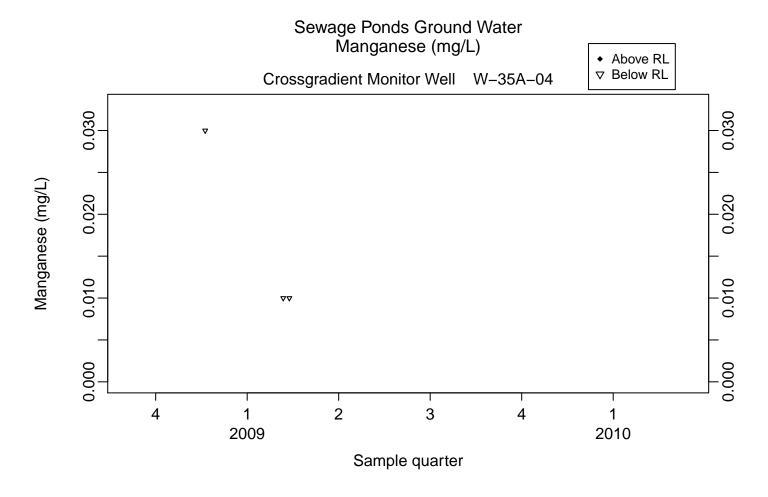


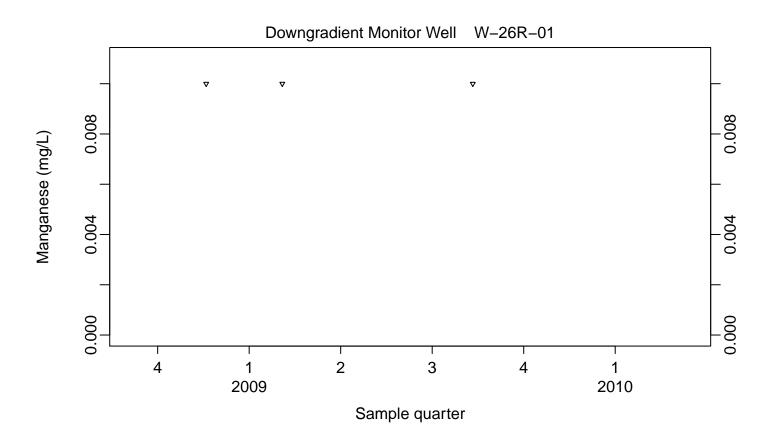


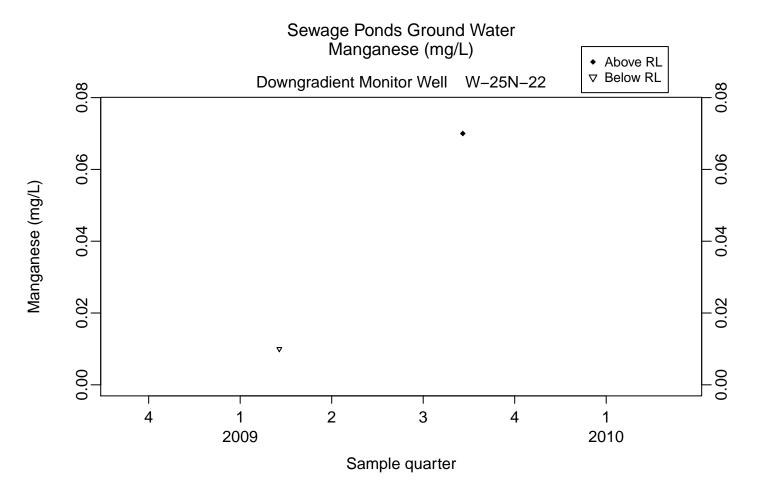


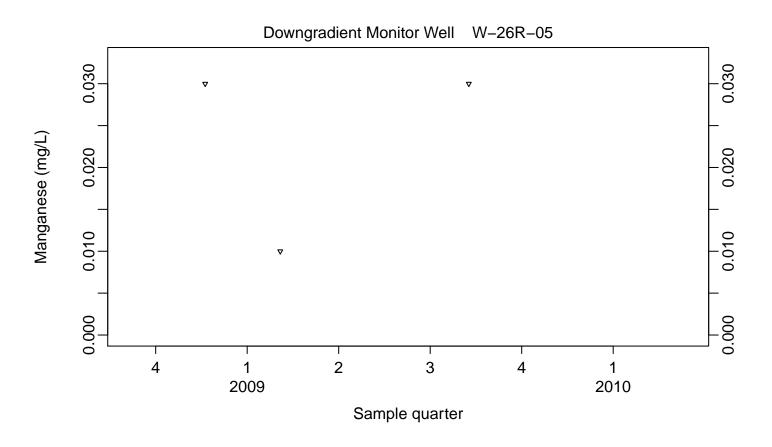


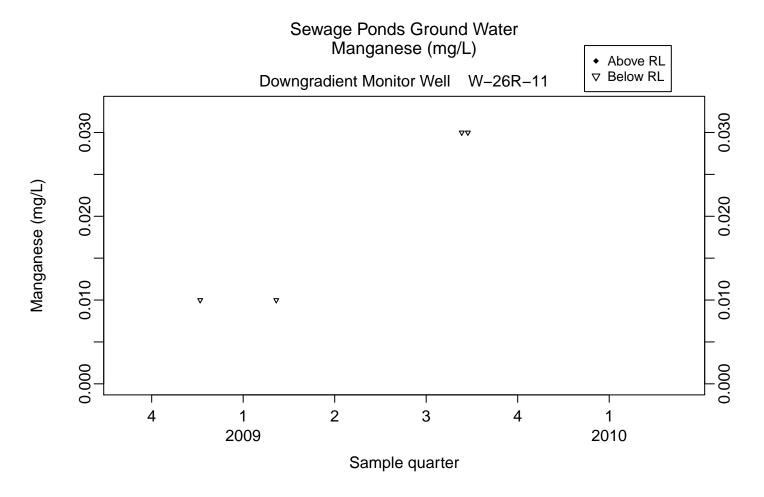


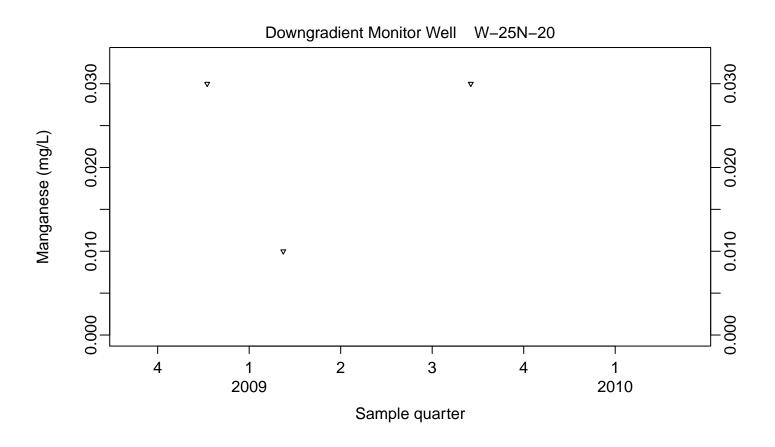


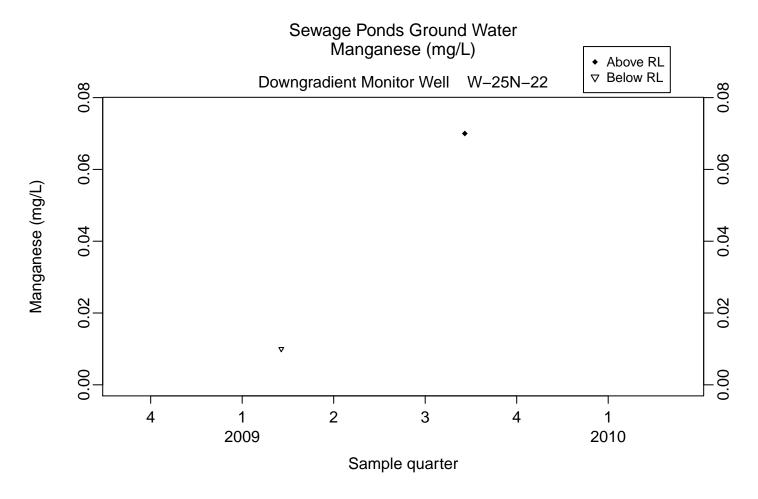


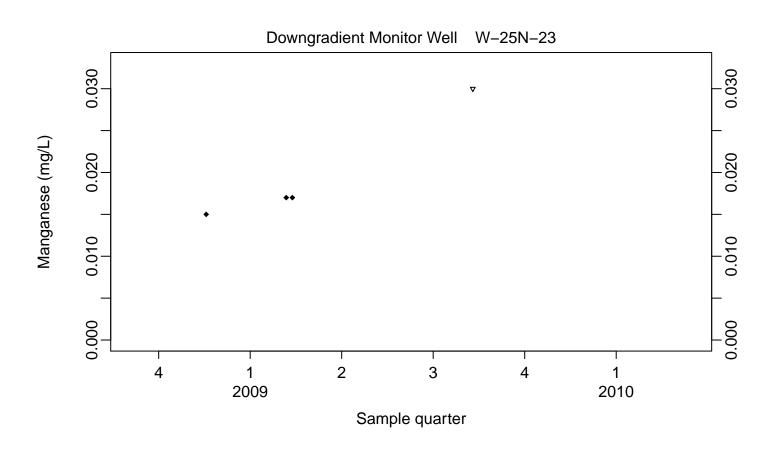


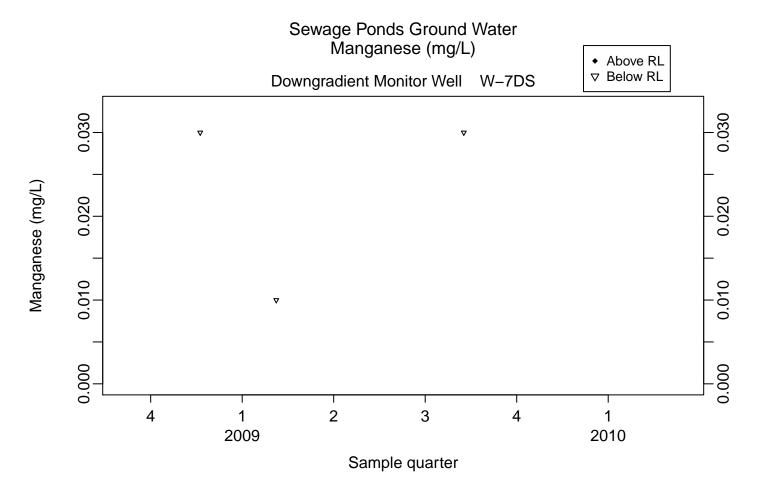


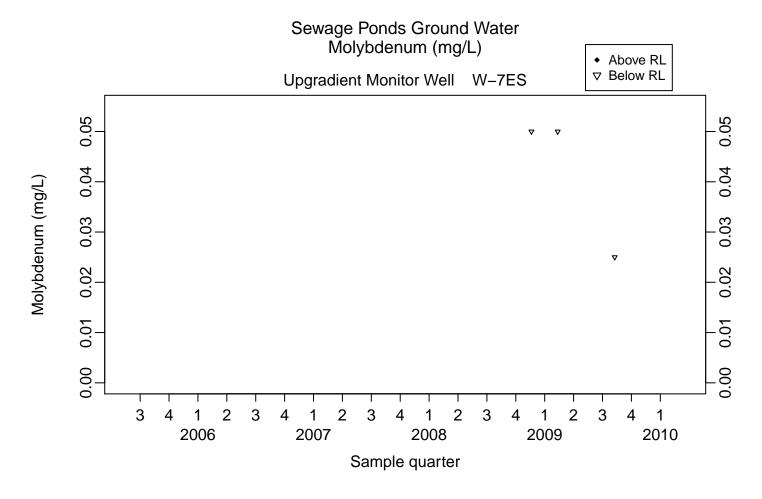


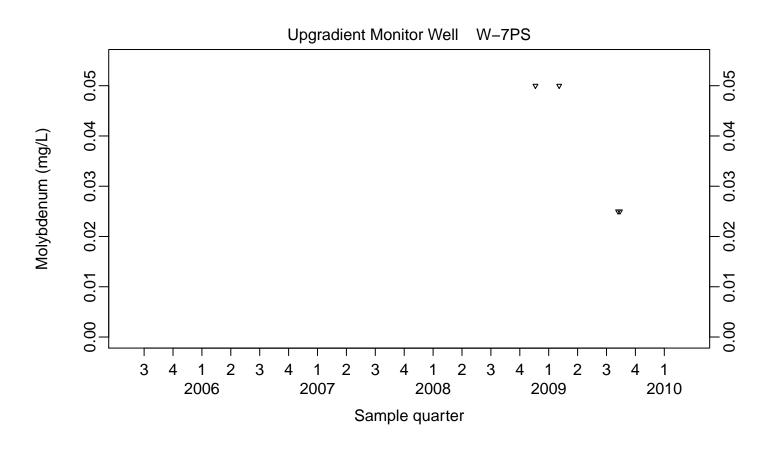


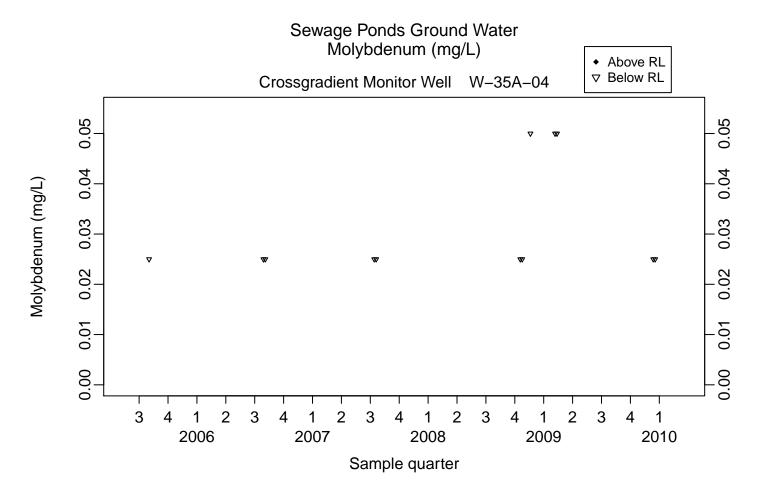


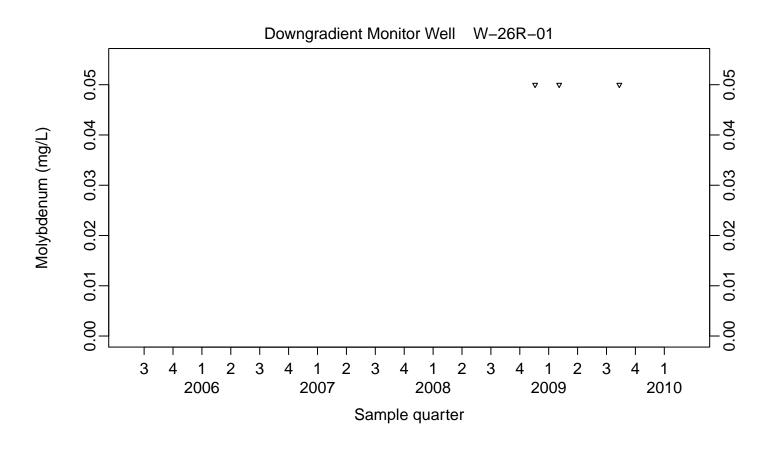


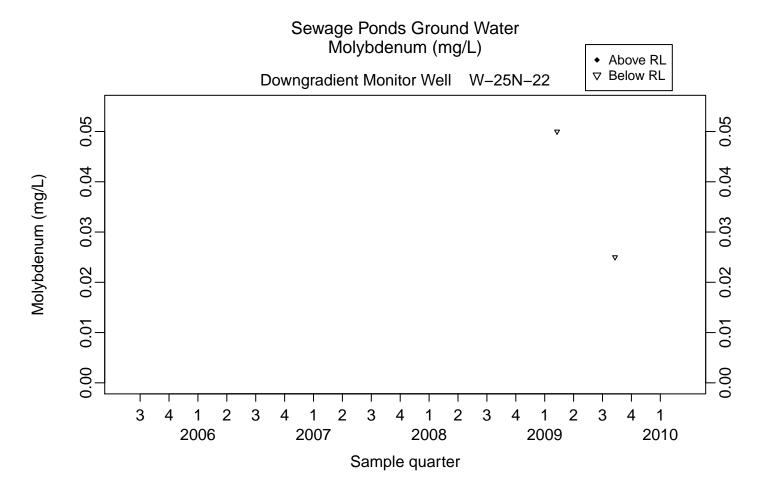


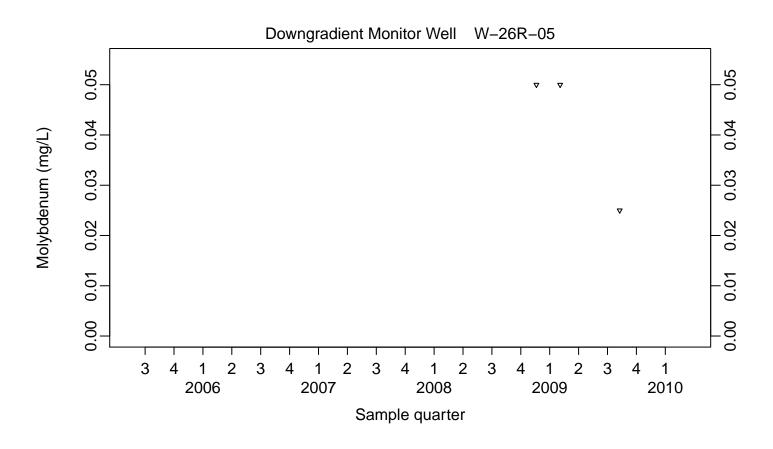


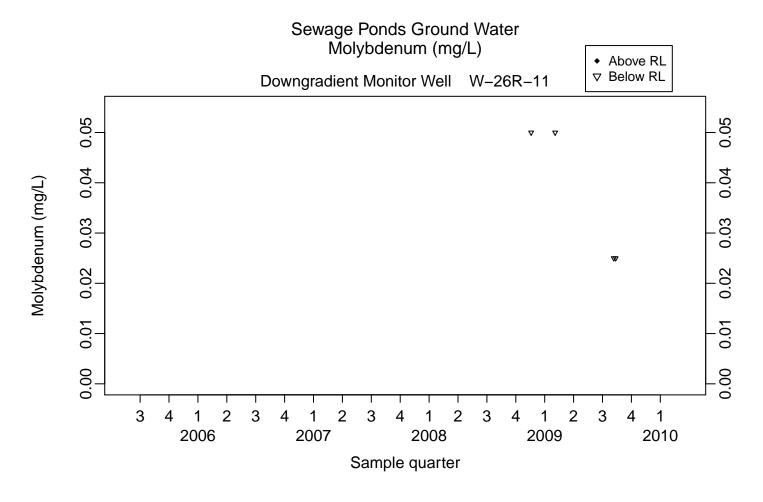


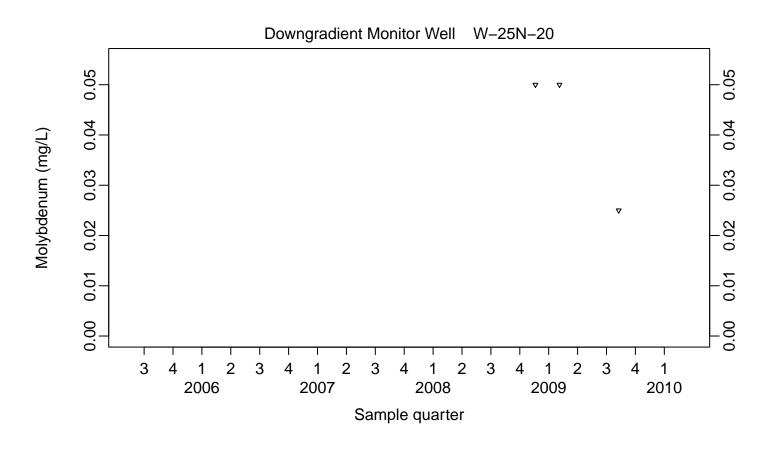


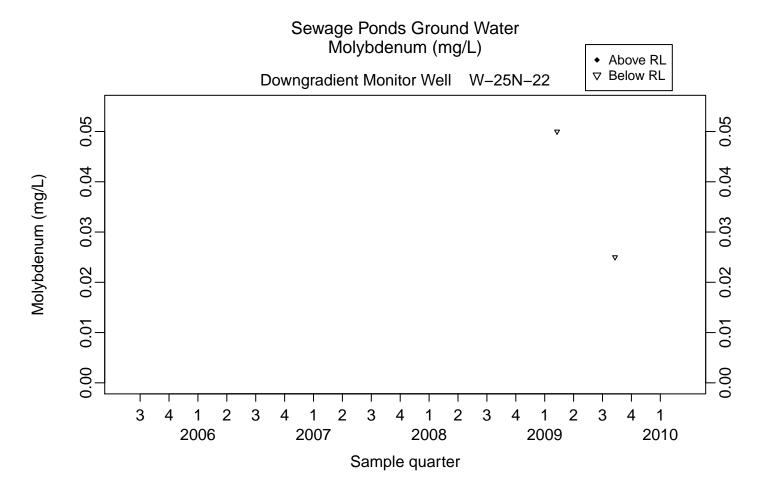


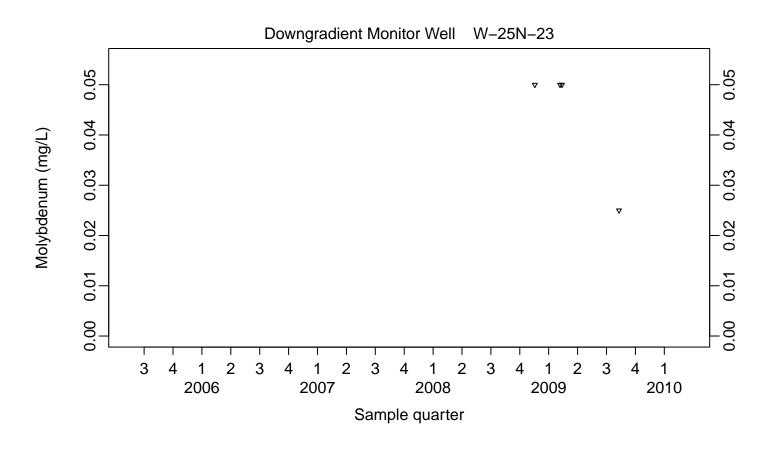


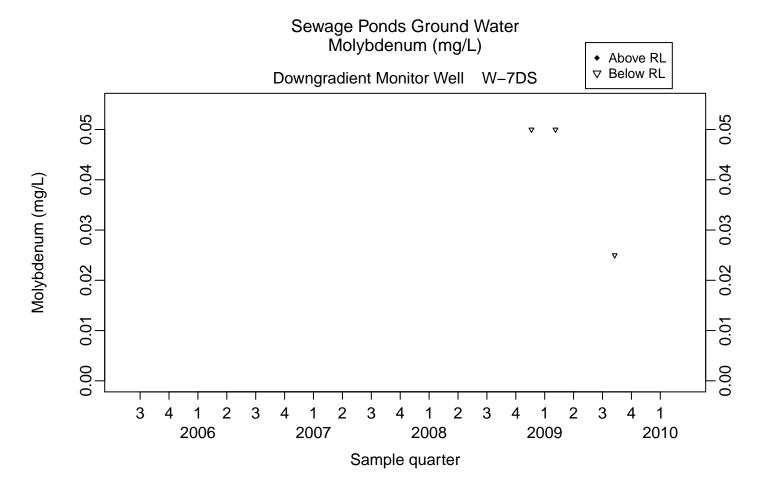


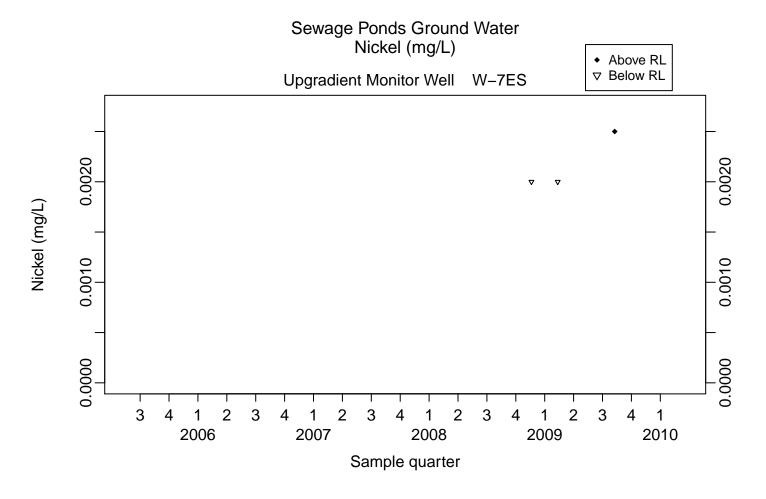


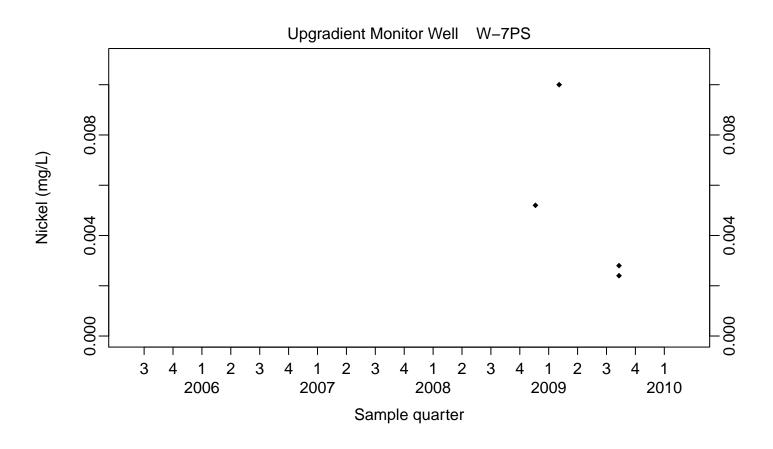


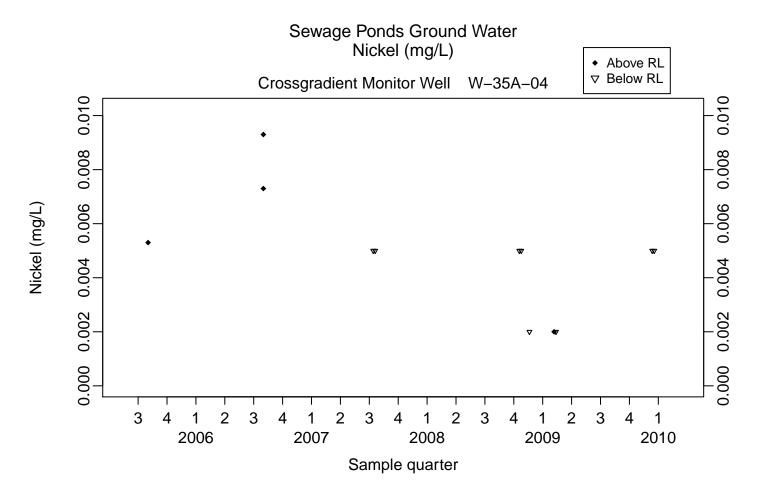


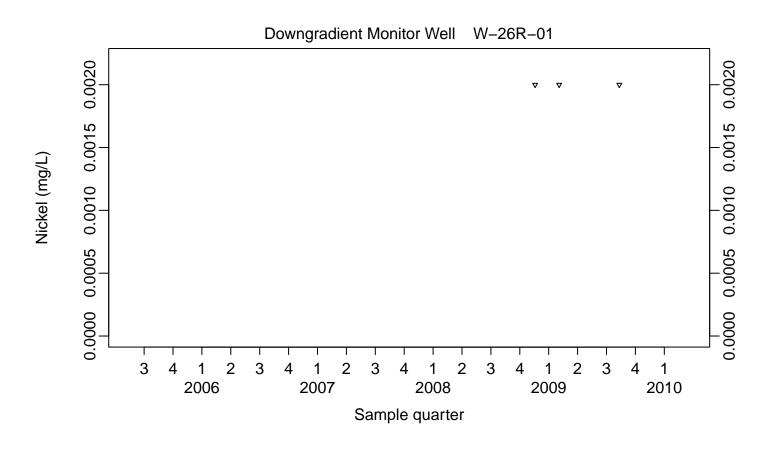


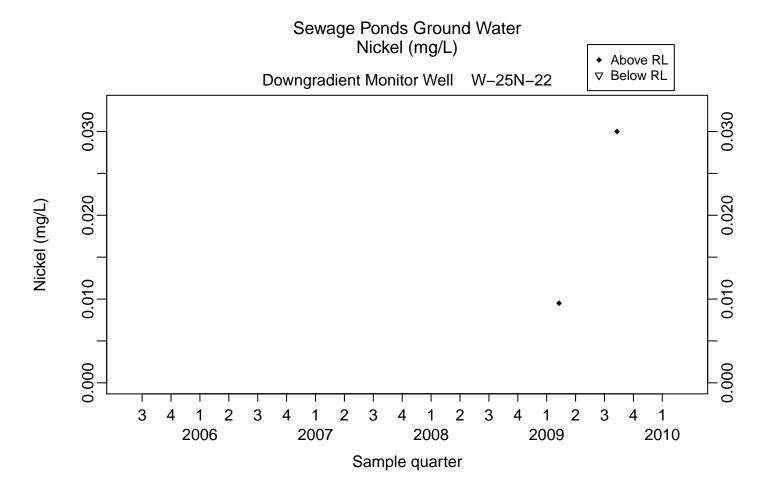


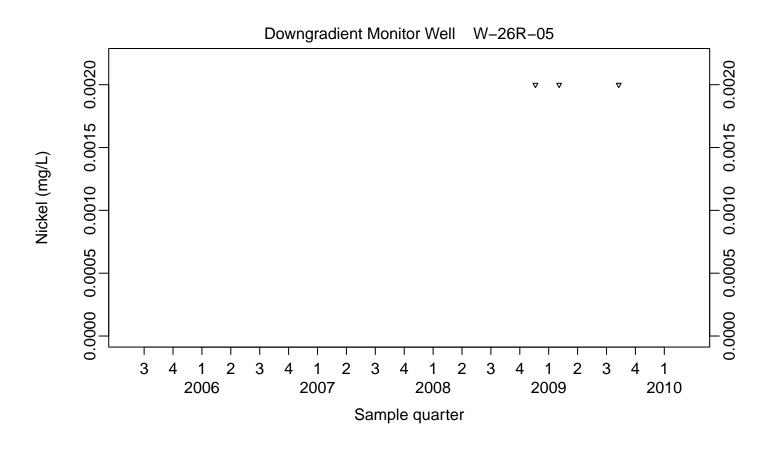


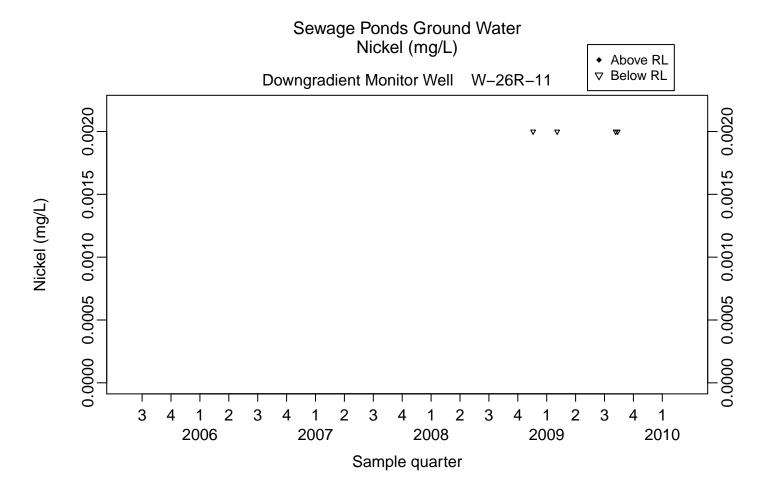


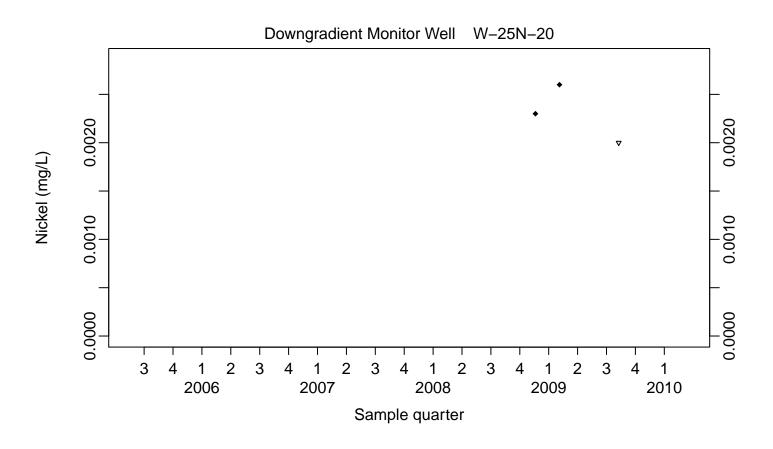


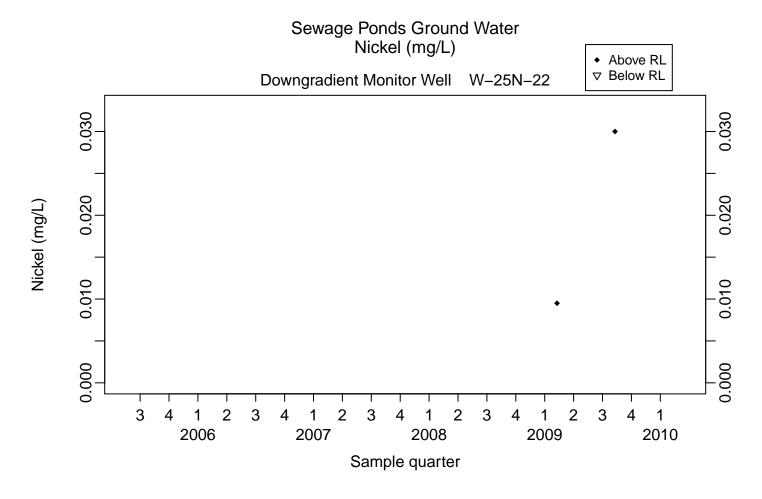


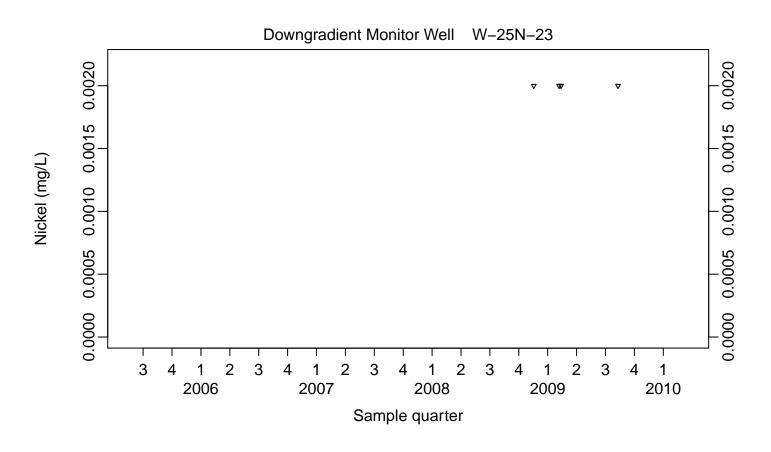


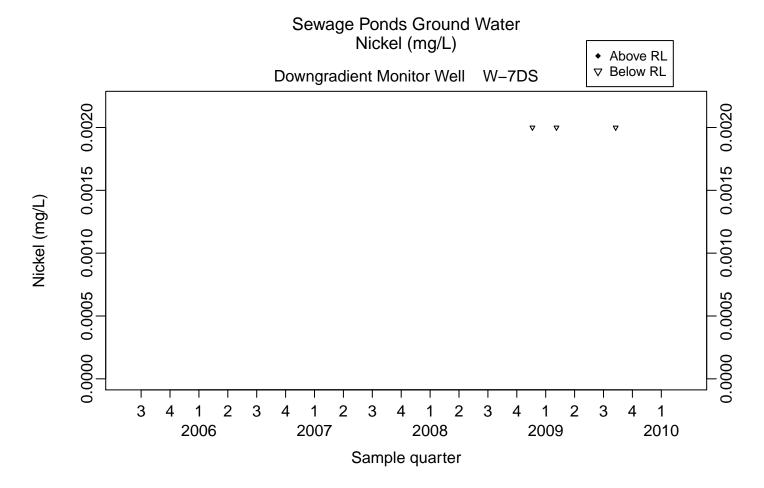


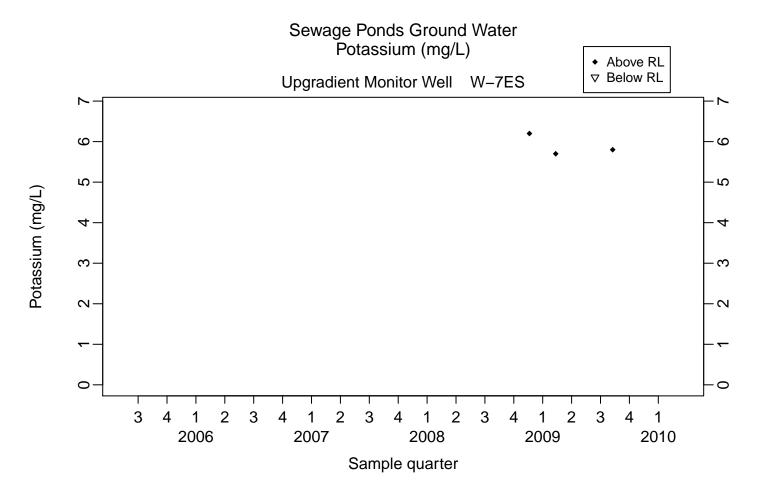


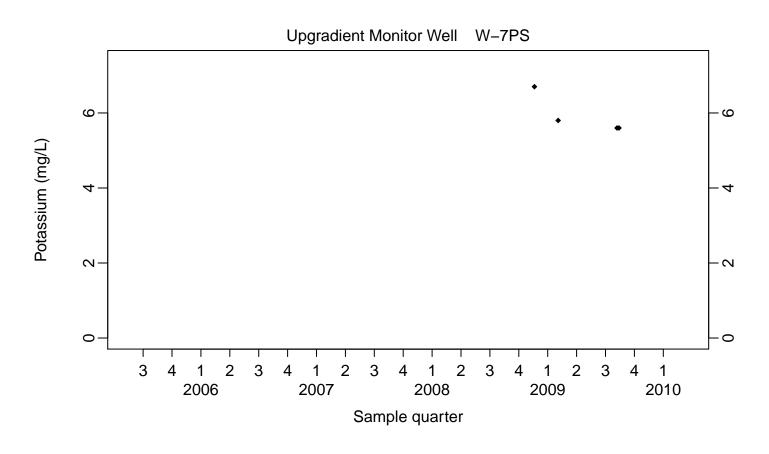


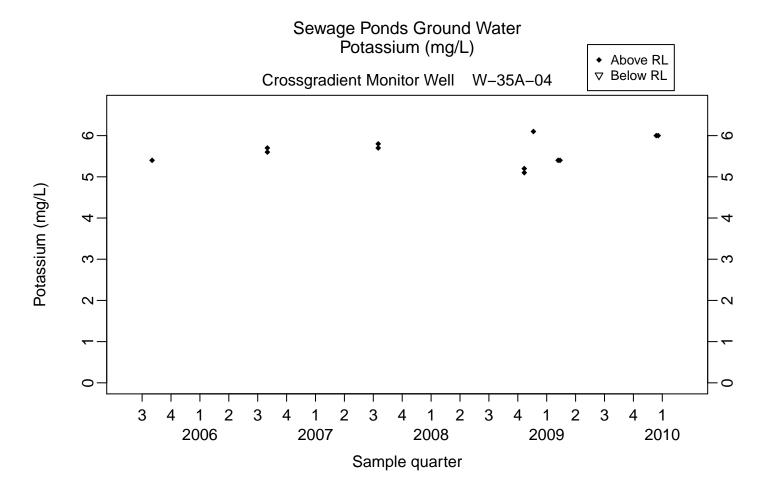


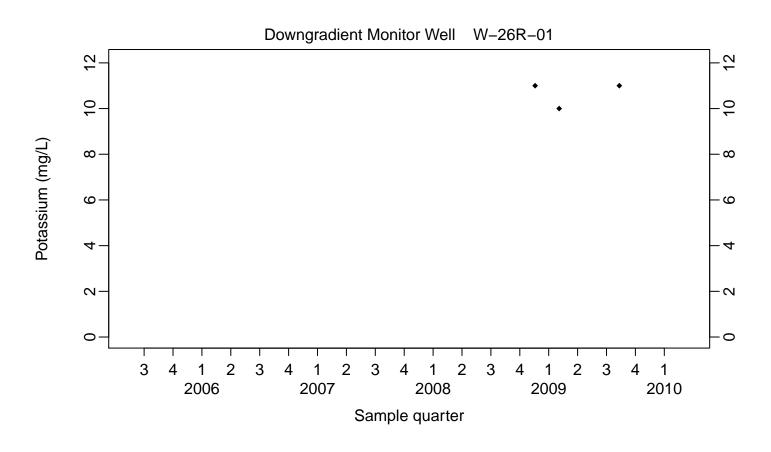


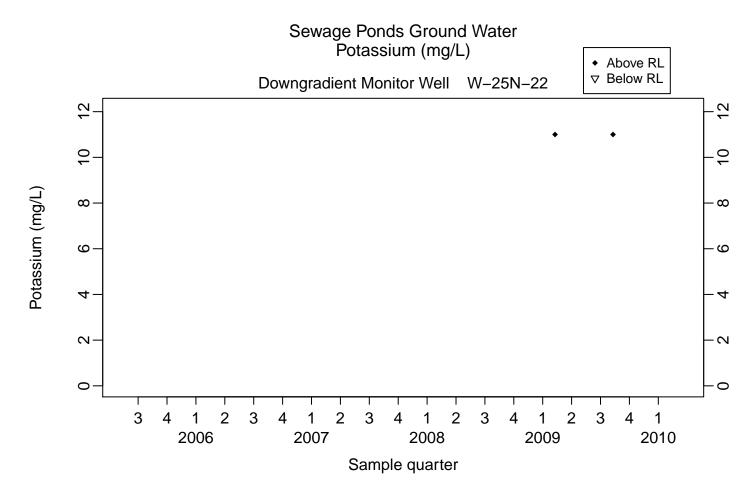


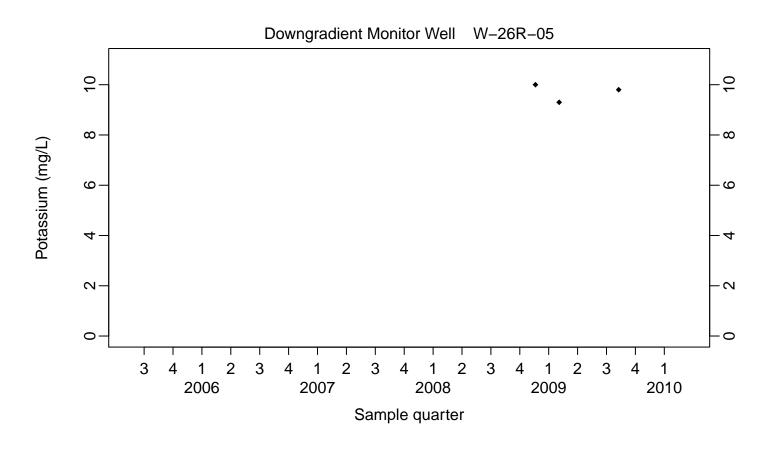


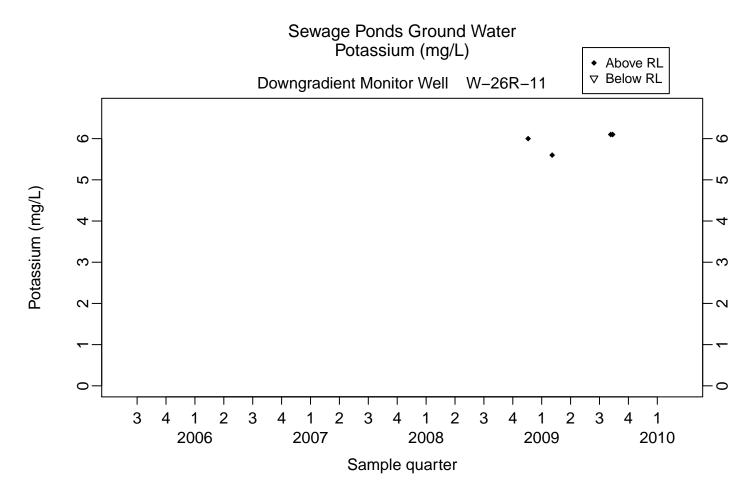


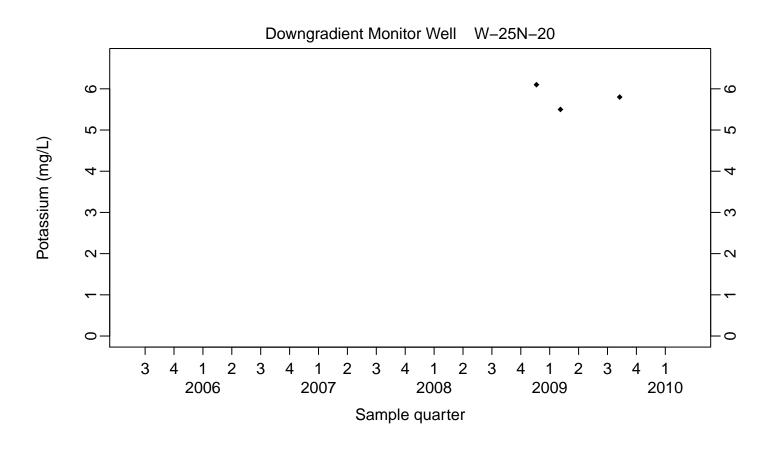


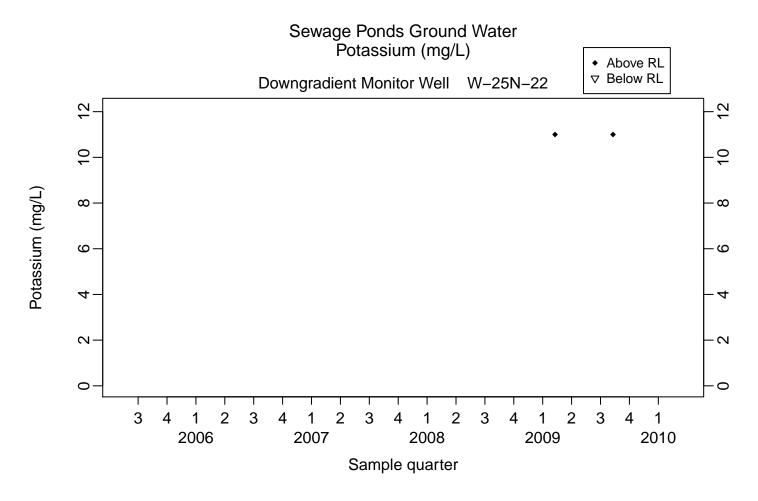


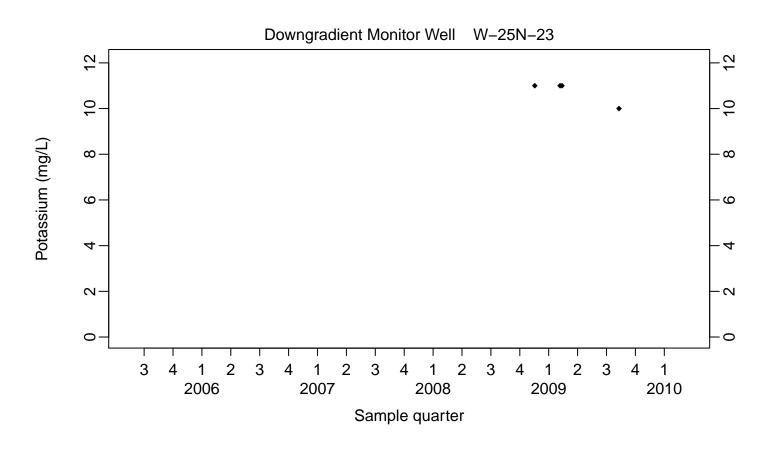


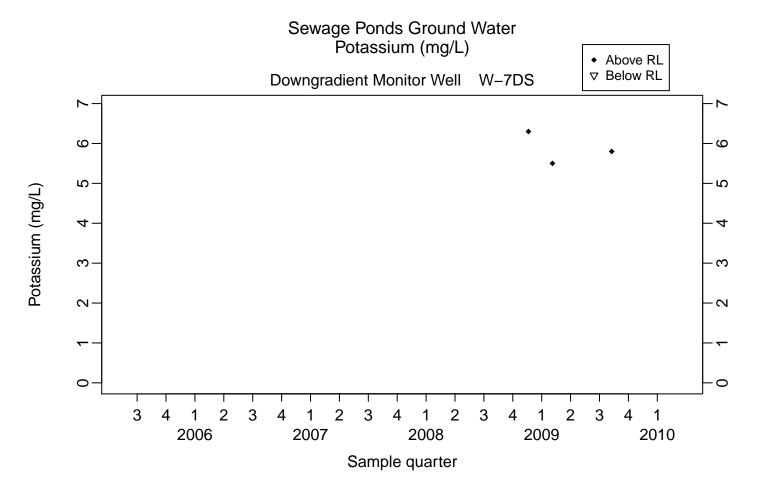


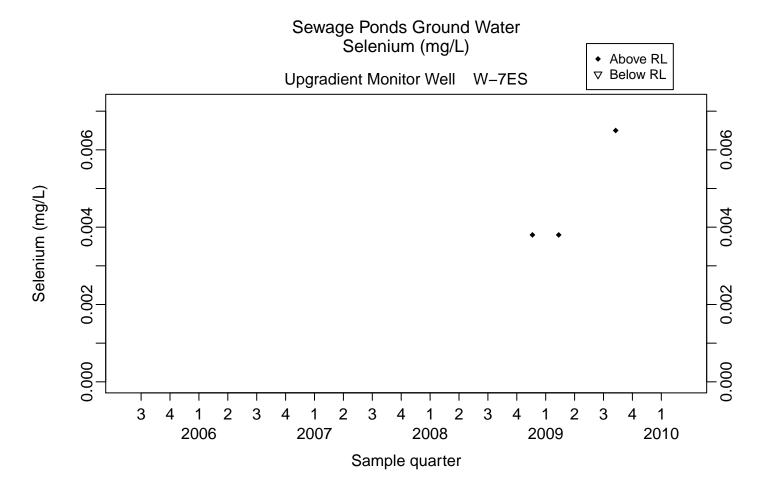


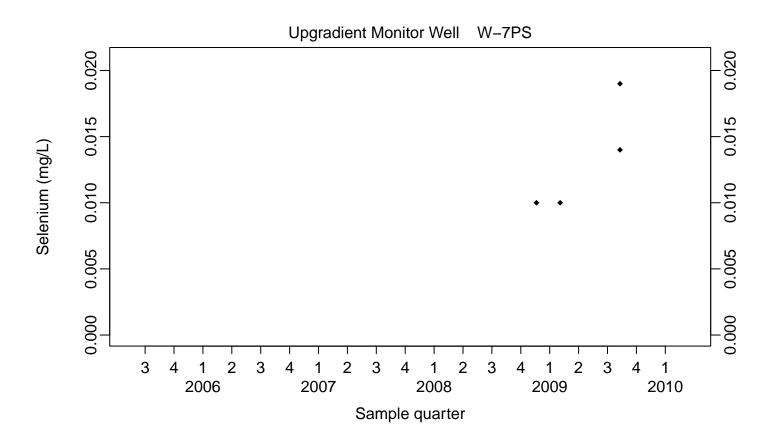


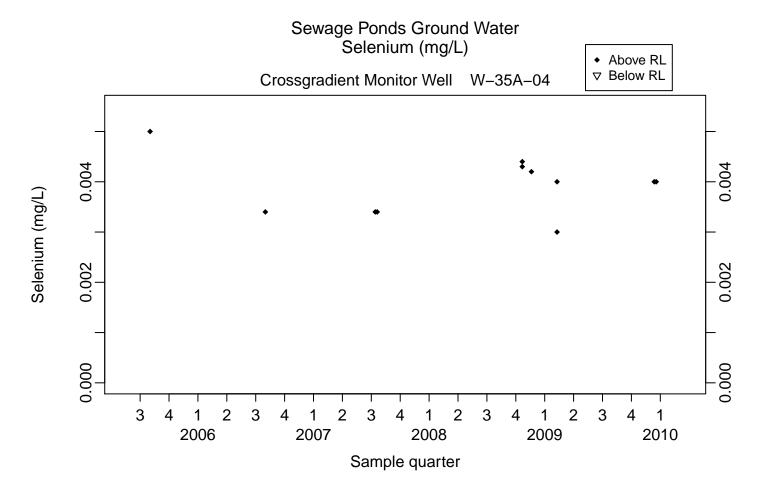


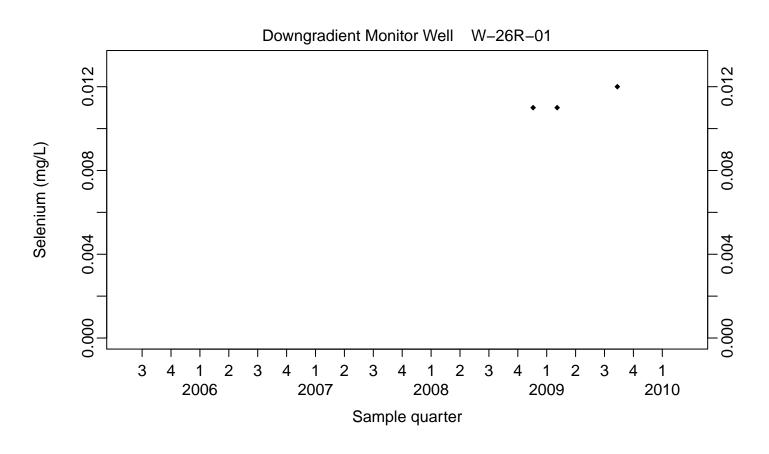


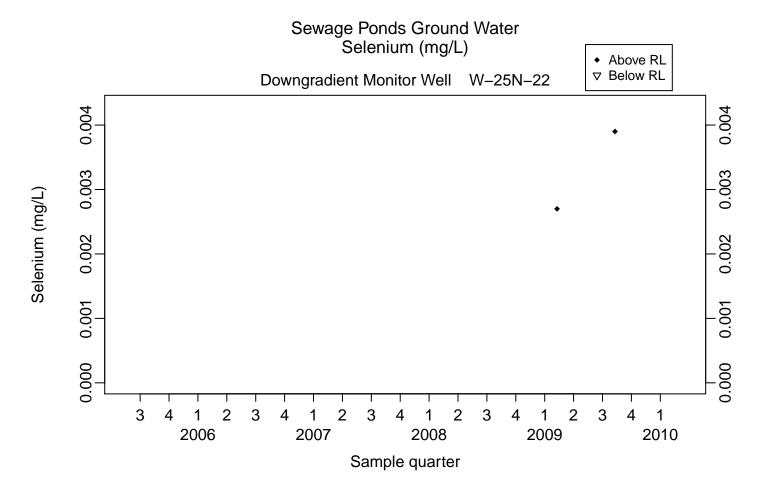


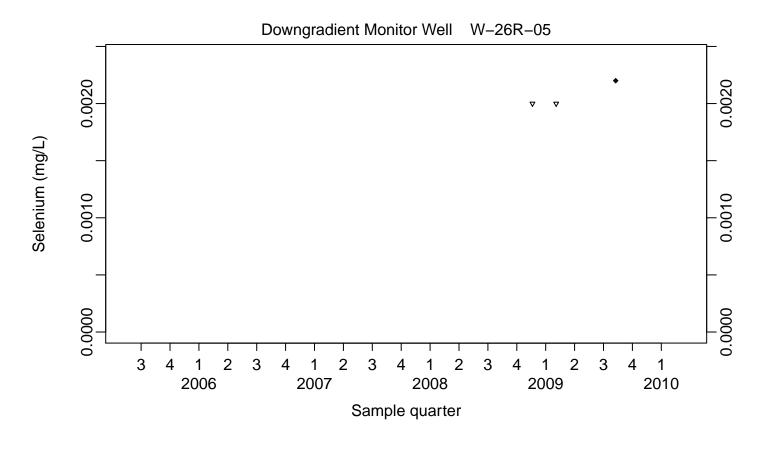


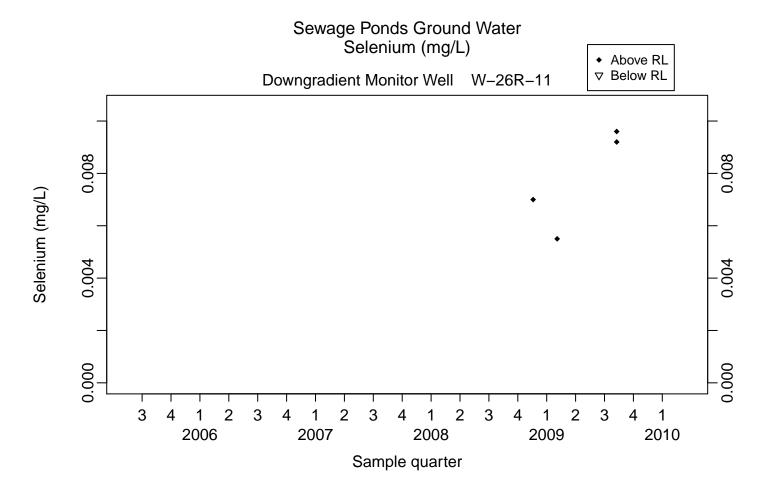


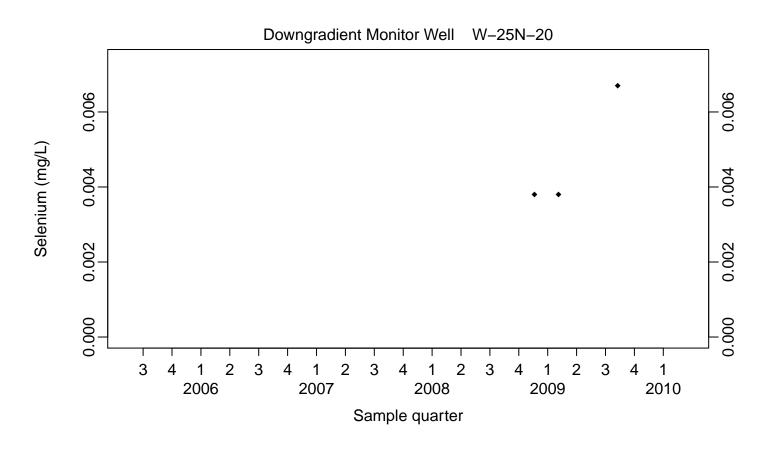


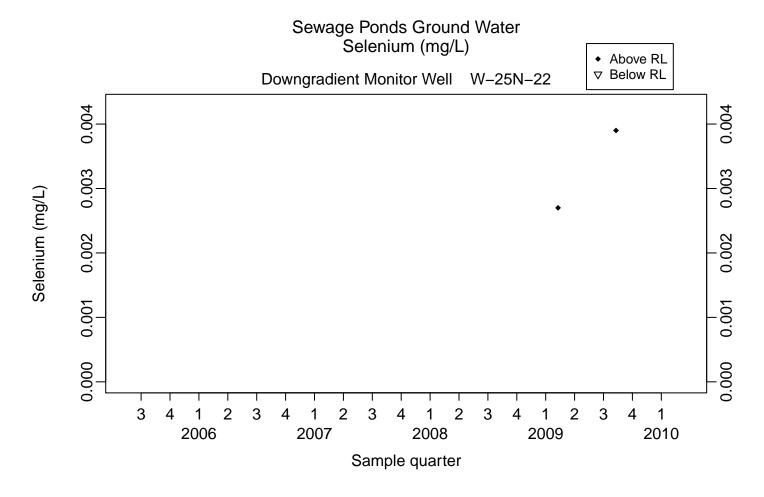


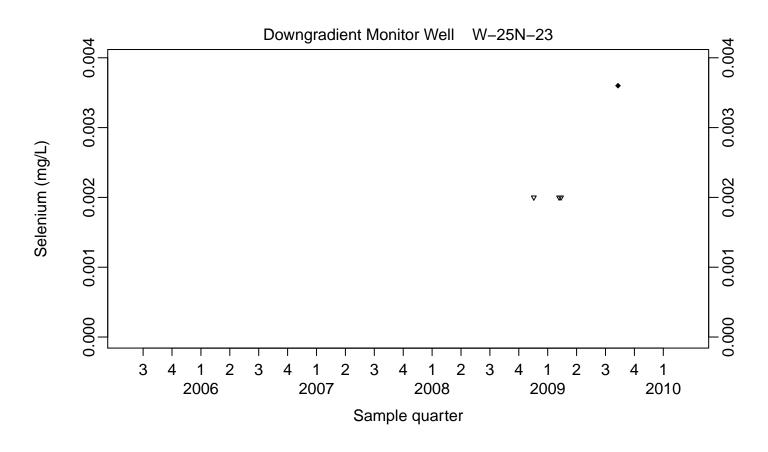


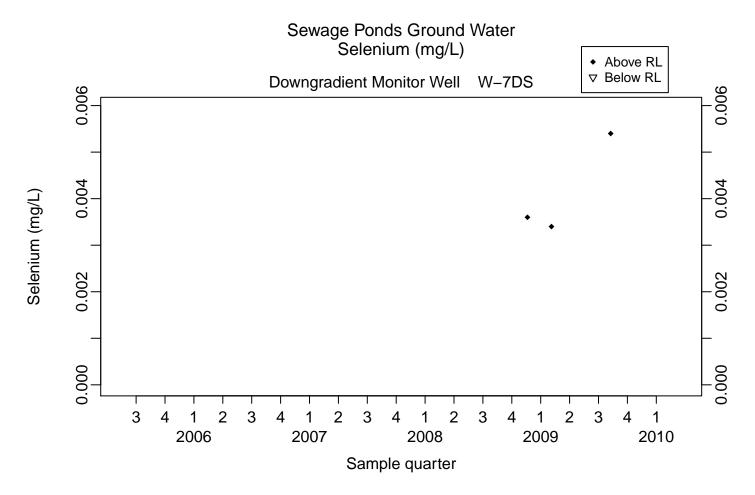


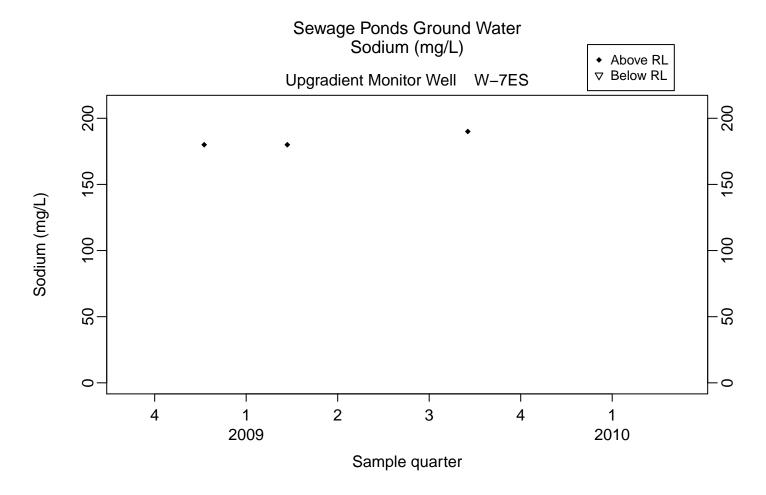


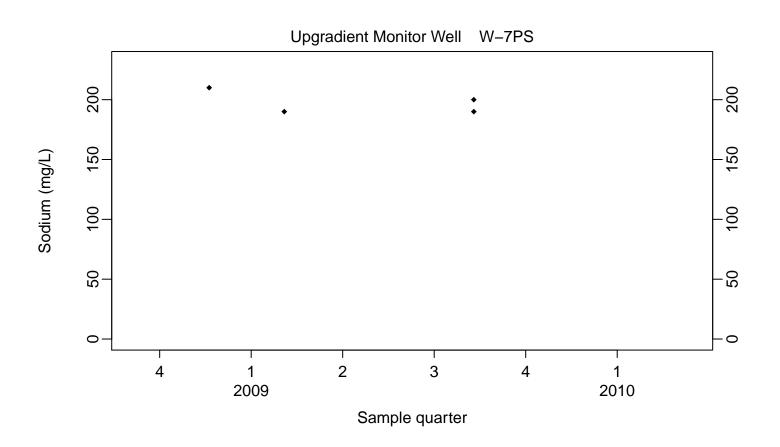


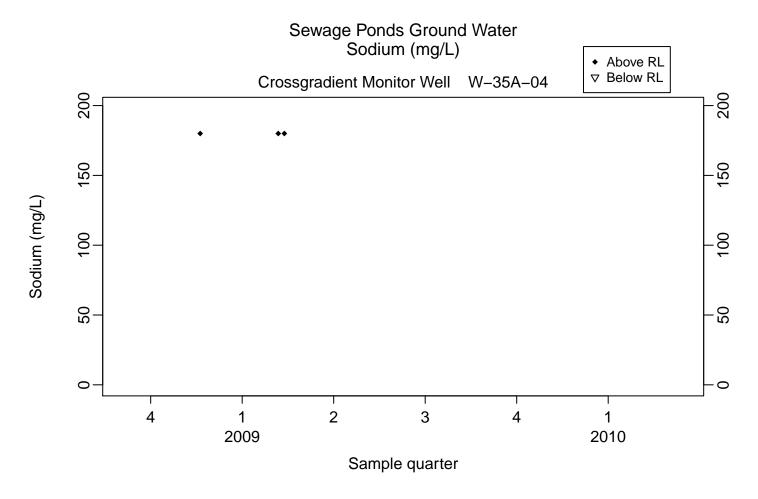


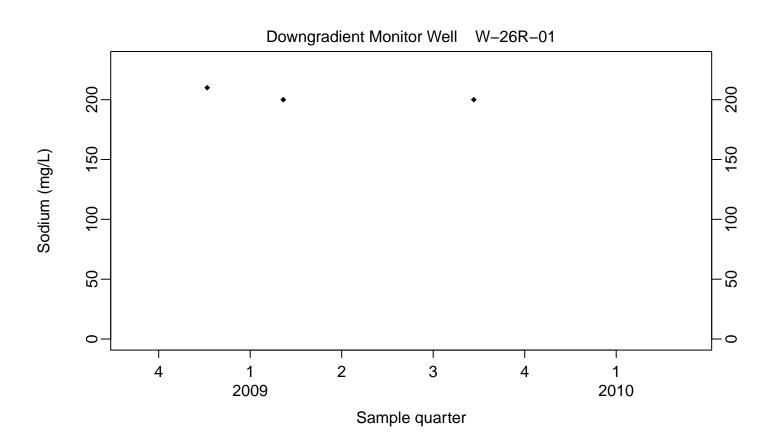


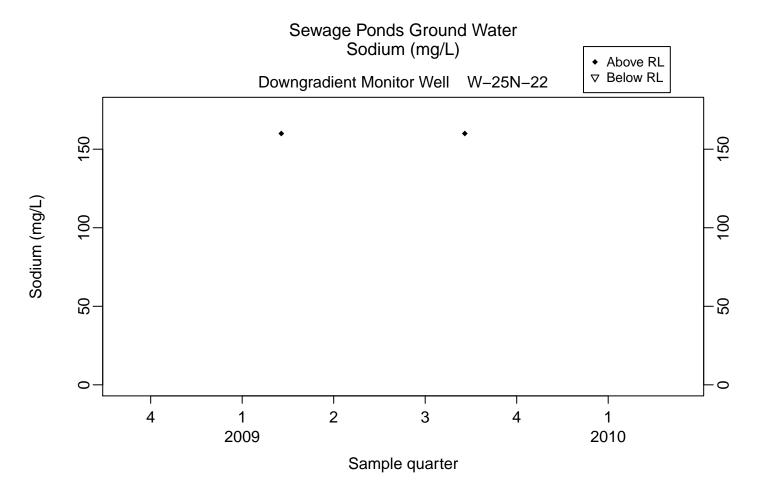


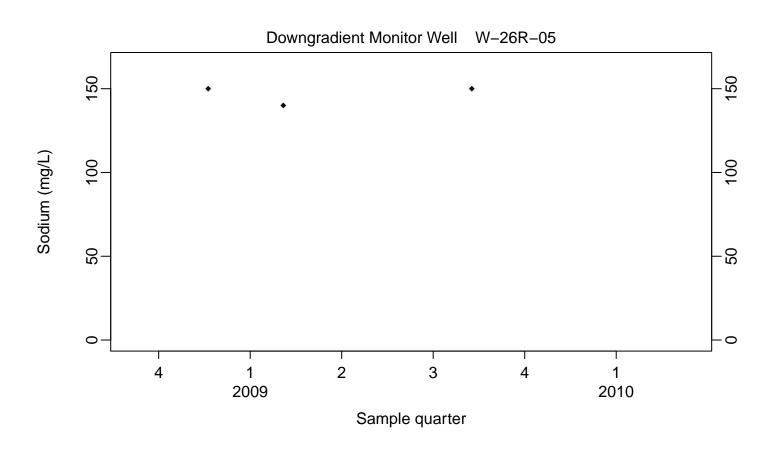


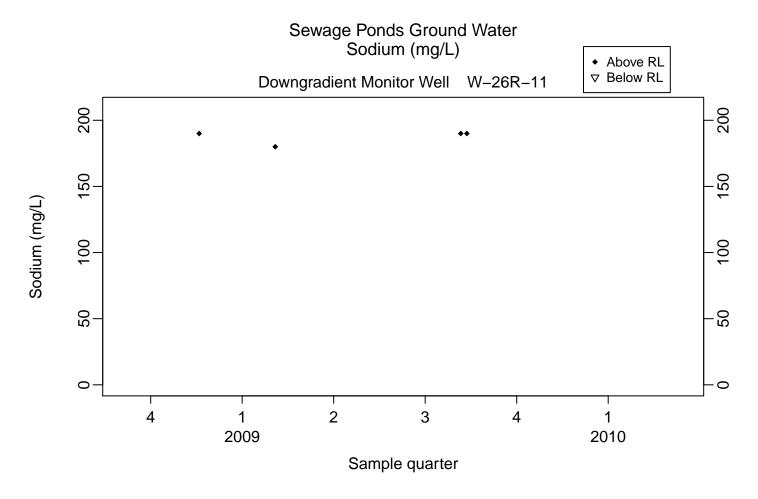


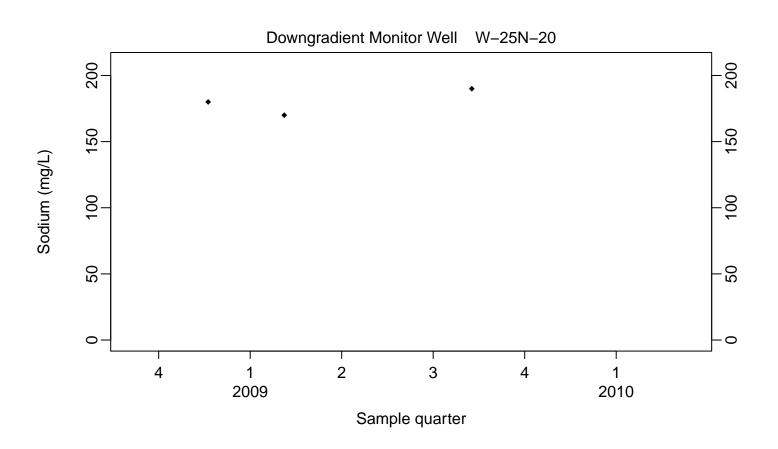


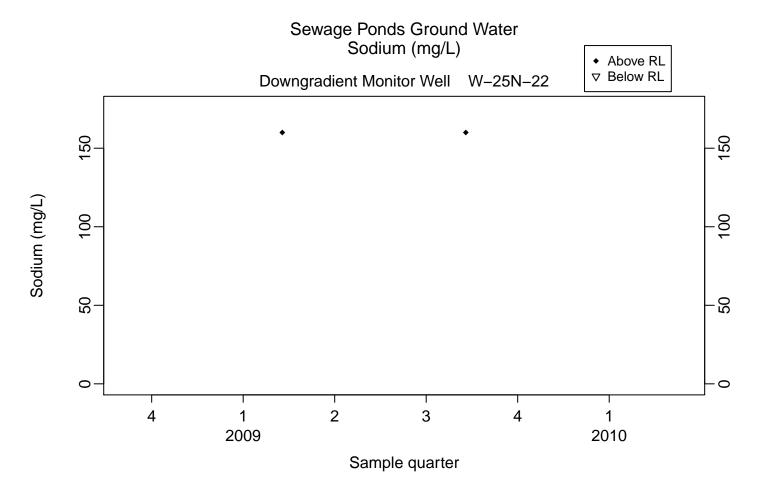


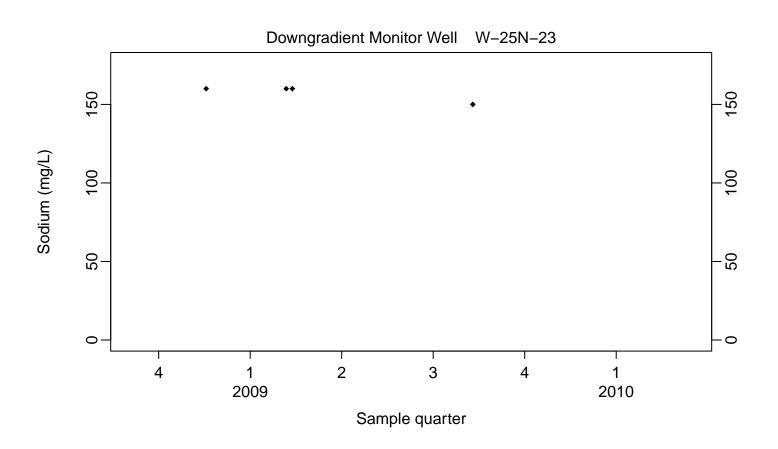


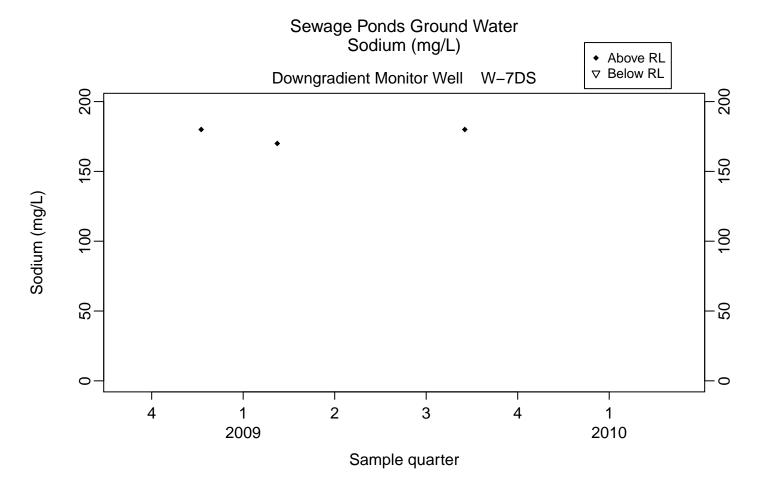


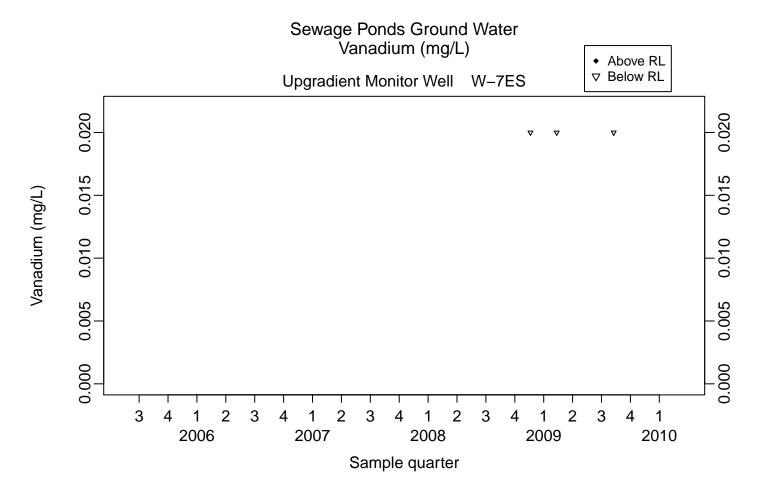


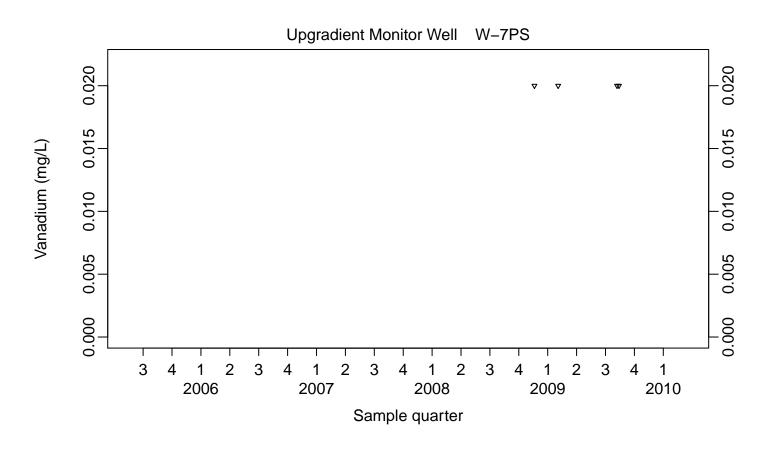


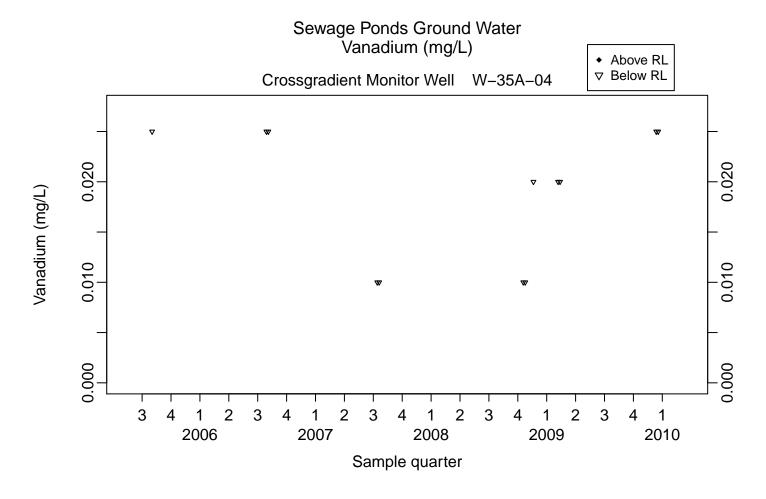


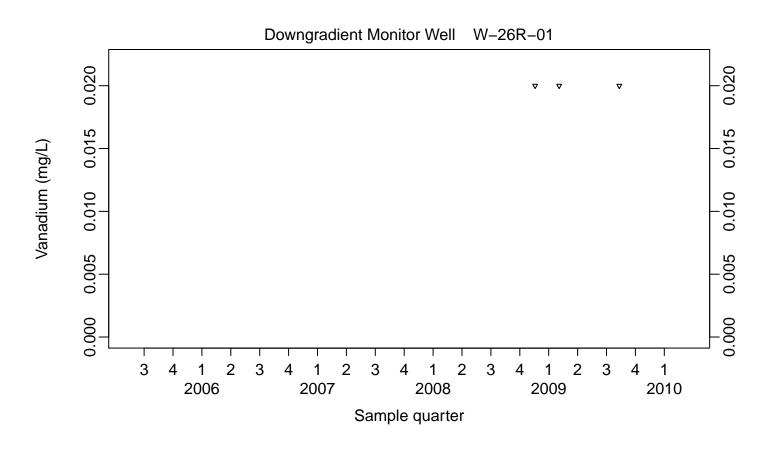


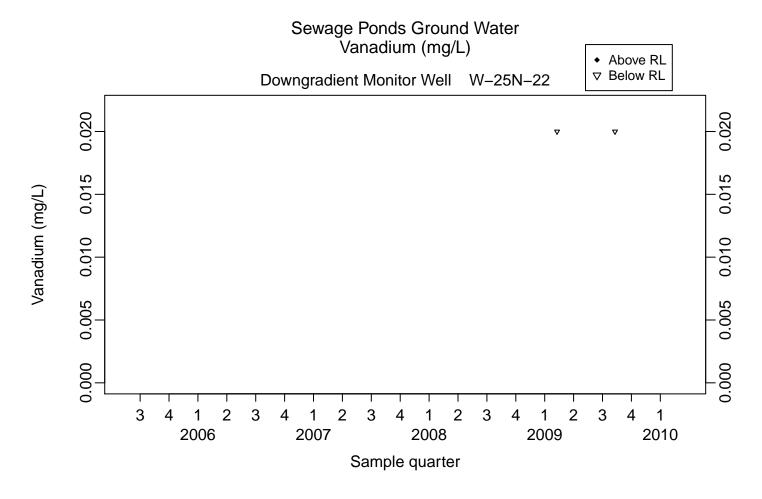


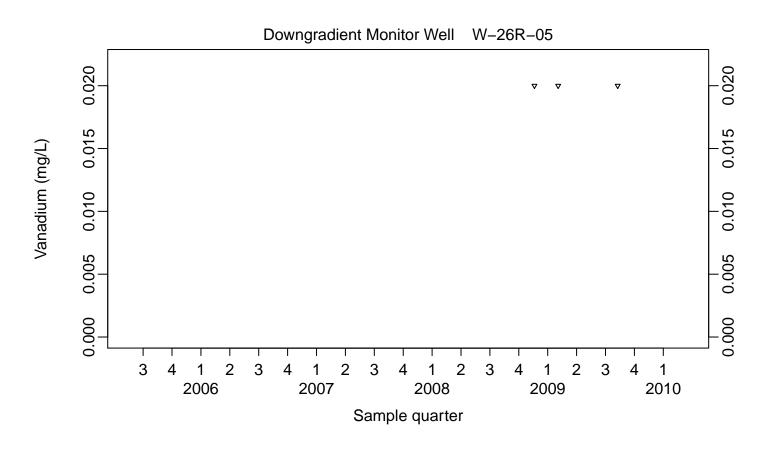


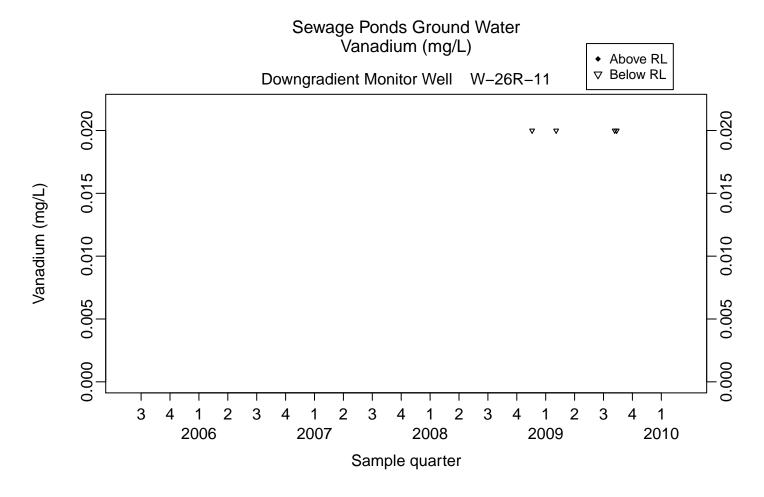


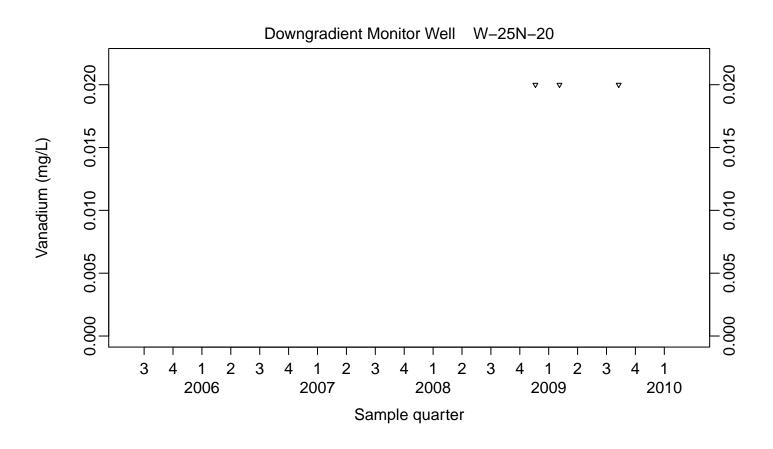


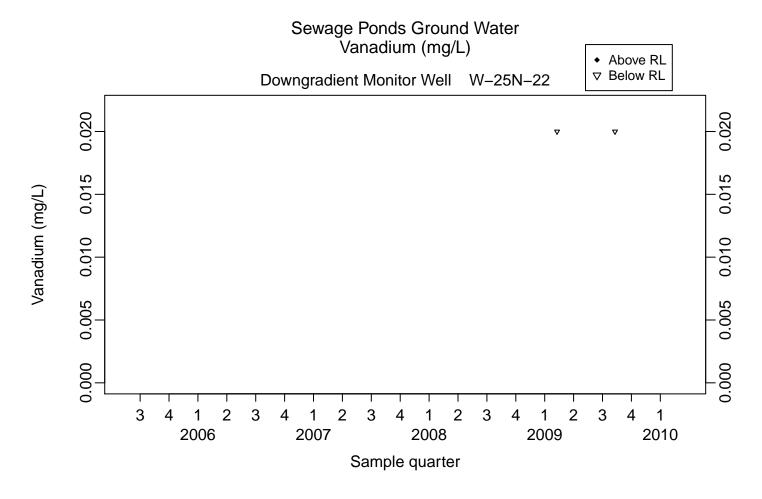


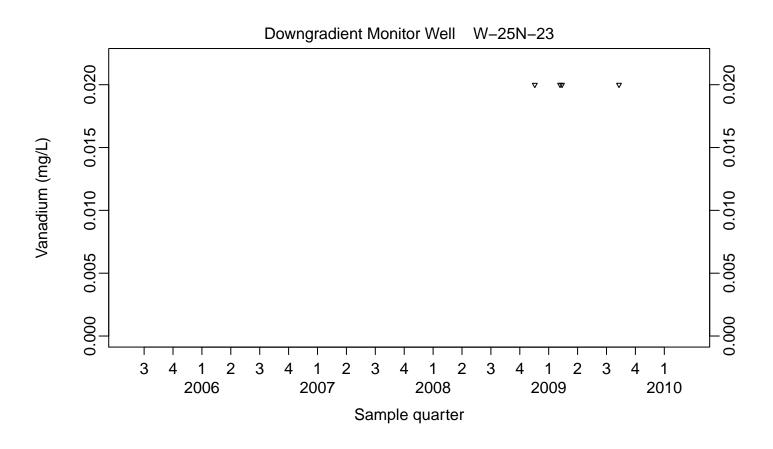


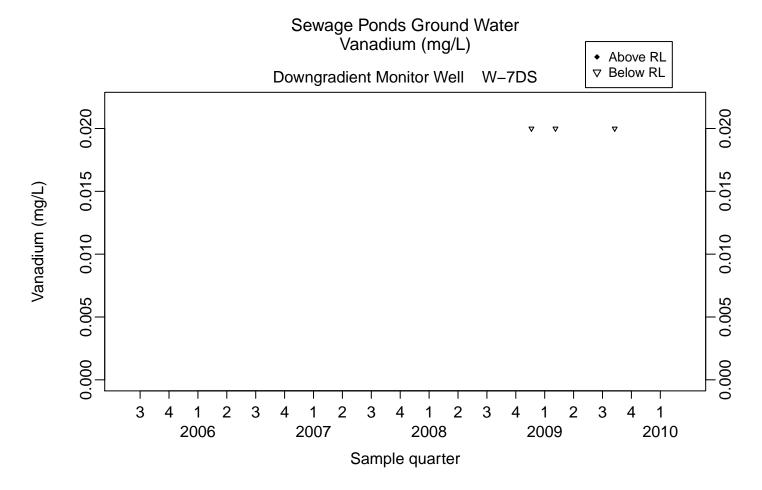


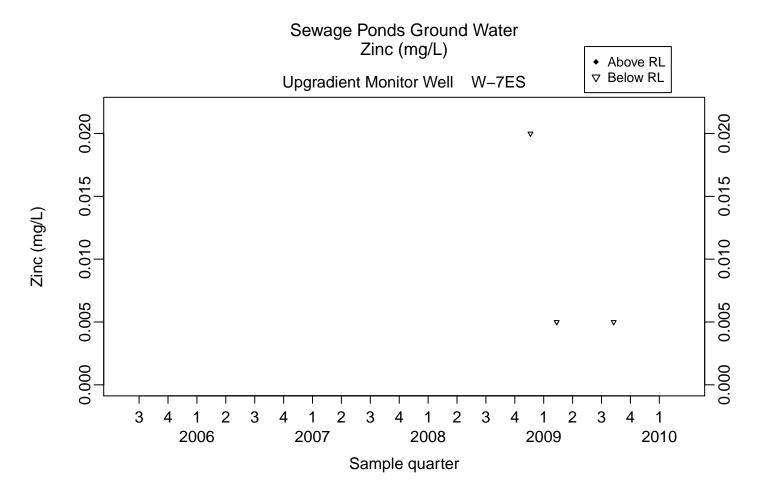


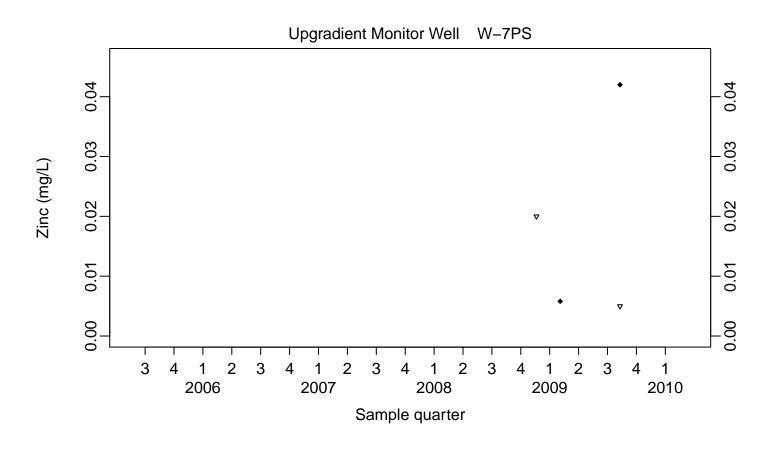


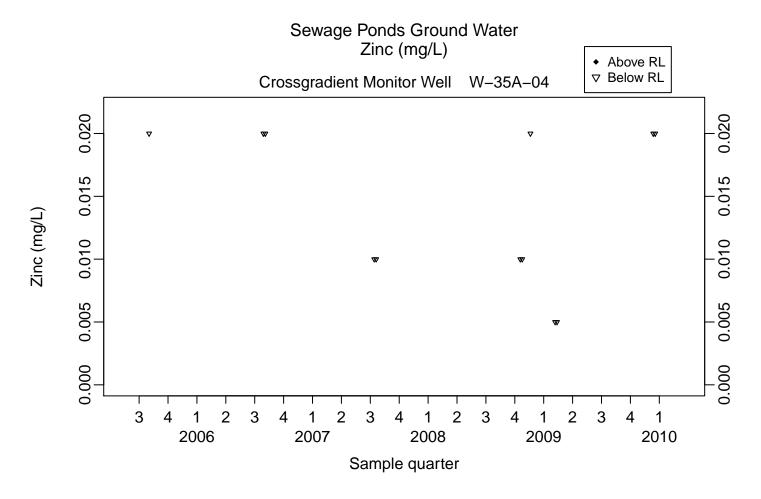


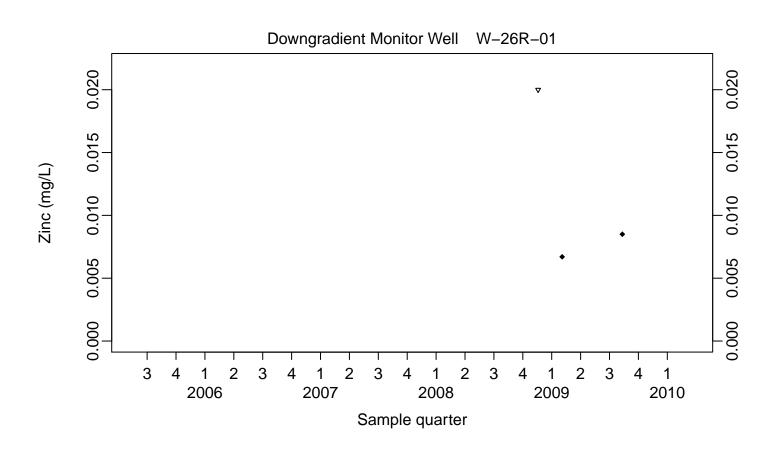


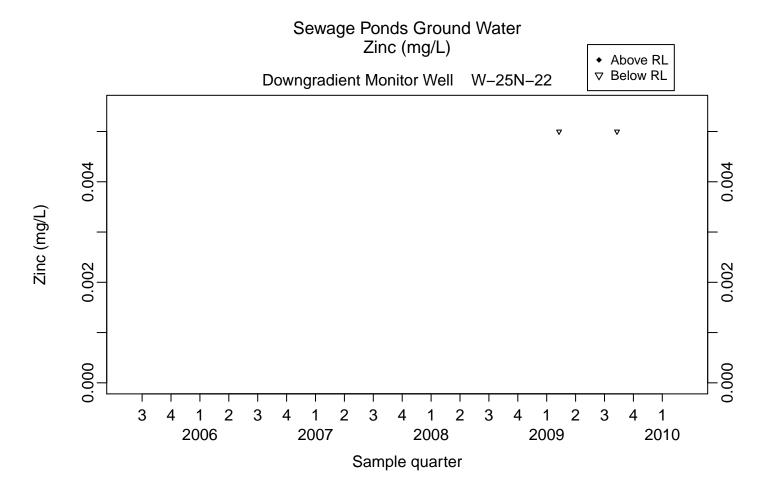


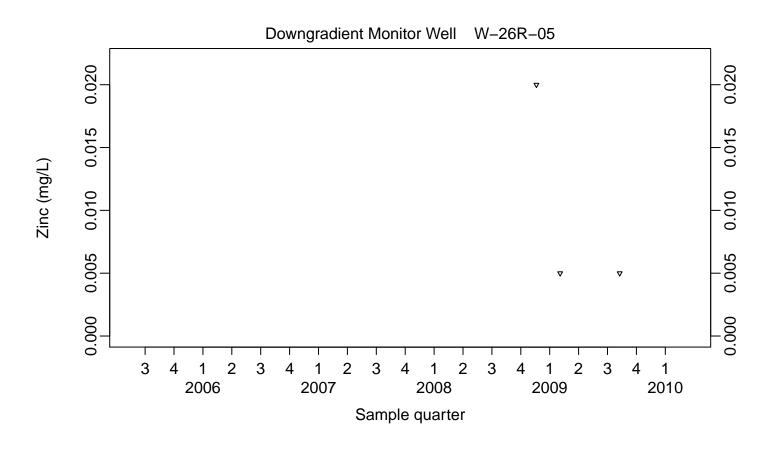


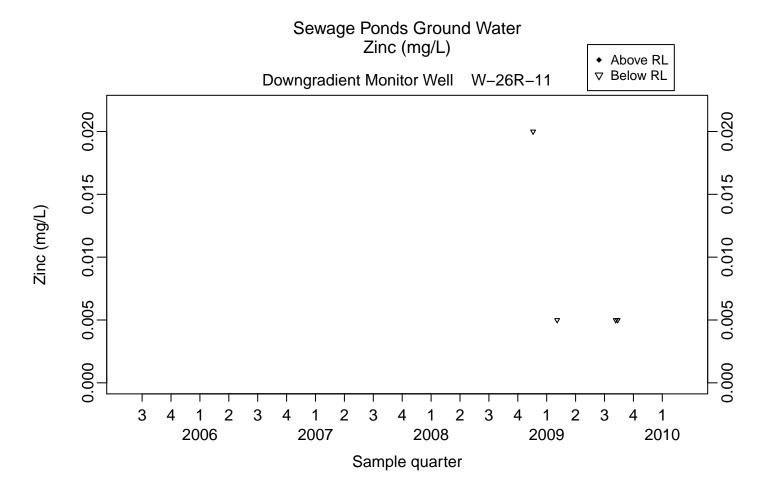


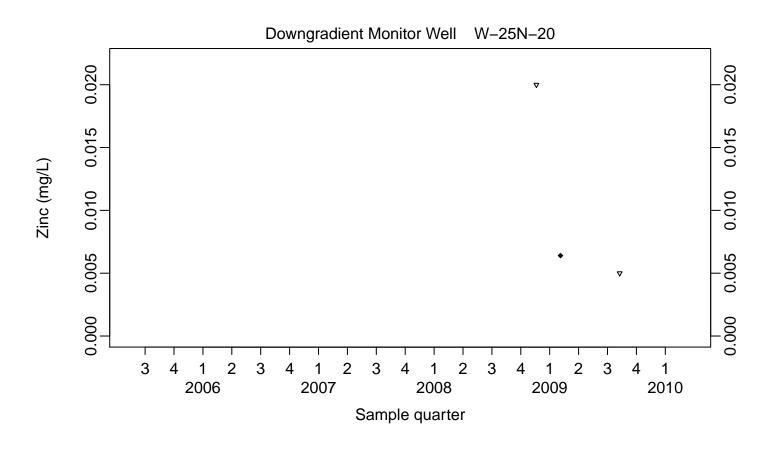


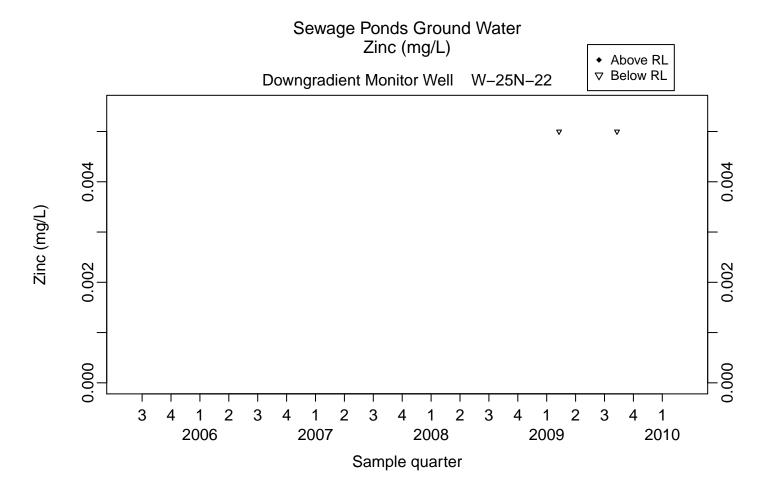


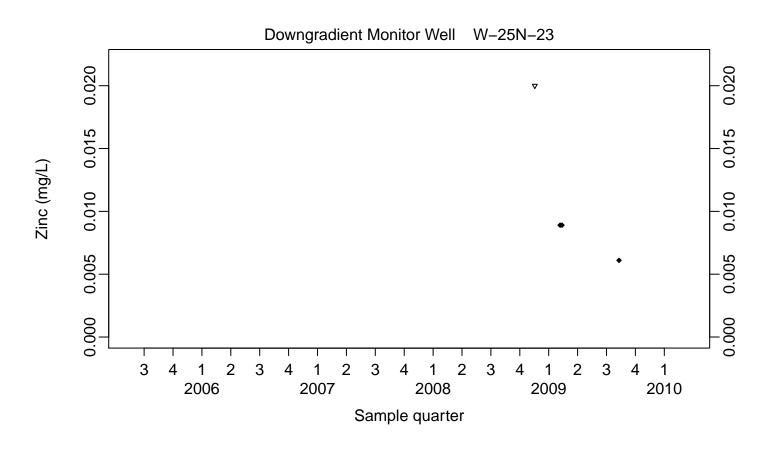


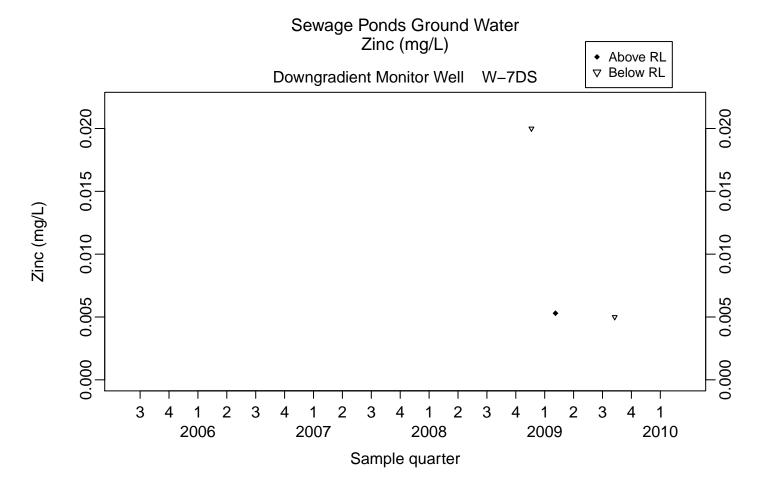












## Appendix B

Septic Systems Groundwater Monitoring Networks for Buildings 812, 834, 850, and 899

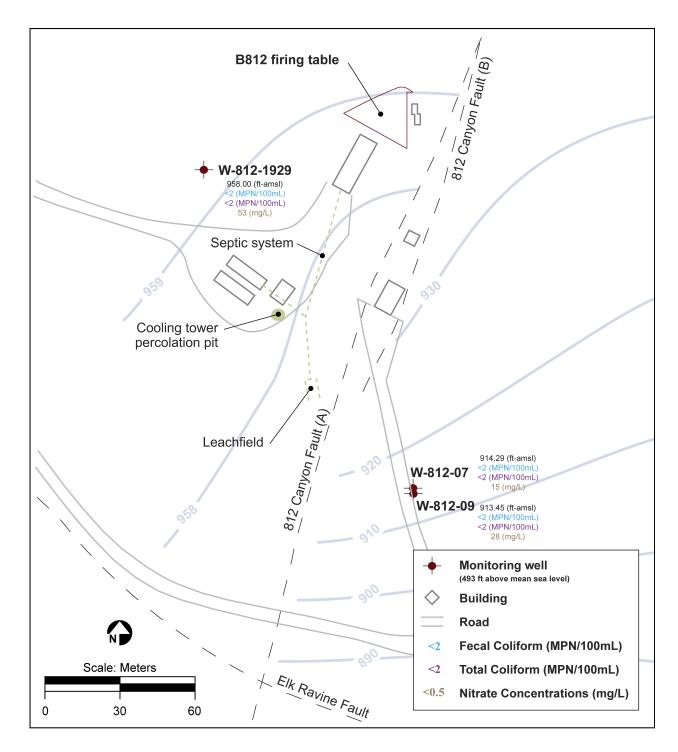


Figure B.1. Building 812 ground water elevation contour map and the second semester sampling results for the septic system monitoring wells in the first hydrostratigraphic unit.

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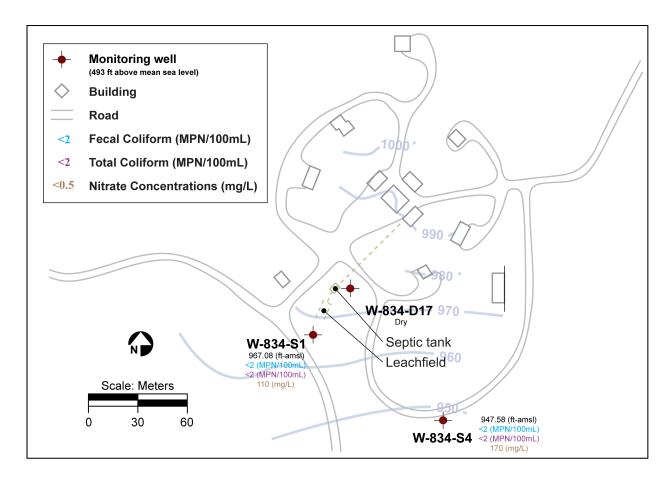


Figure B.2. Building 834 ground water elevation contour map and the second semester sampling results for the septic system monitoring wells in the first hydrostratigraphic unit.

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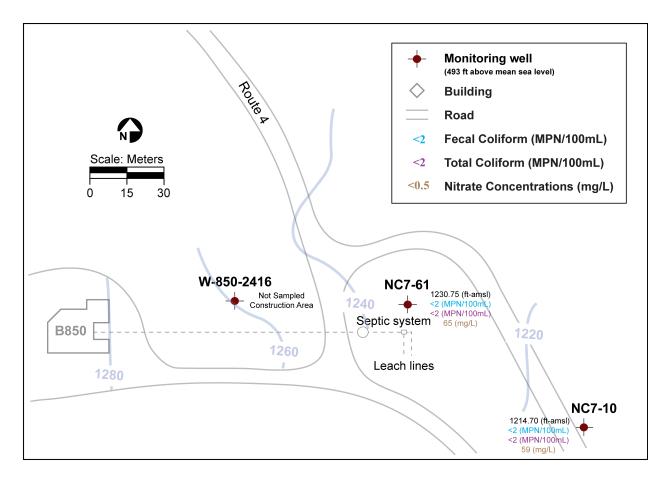


Figure B.3. Building 850 ground water elevation contour map and the second semester sampling results for the septic system monitoring wells in the first hydrostratigraphic unit.

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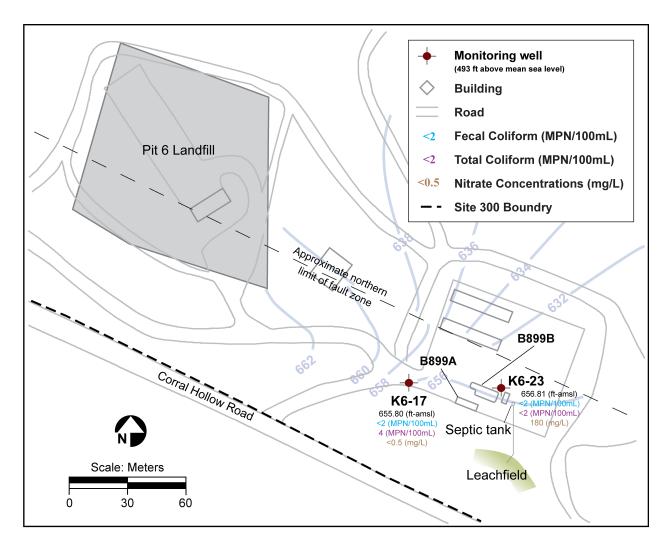


Figure B.4. Building 899 ground water elevation contour map and the second semester sampling results for the septic system monitoring wells in the first hydrostratigraphic unit.

#### LLNL Site 300 Compliance Monitoring Report for WDR Order No. R5-2008-0148 Annual/Second Semester Report 2009

Table B.1. Summary of septic system well specifications.

Well	HSU	Easting	Northing	Ground surface elevation	Measuring point elevation	Screen top elevation	Screen bottom elevation	Bentonite top elevation	Filter pack top elevation	Well bottom elevation
W-812-07	Tnsc <sub>0</sub>	1,703,364	422,917	938.46	940.46	905.46	895.46	911.46	908.46	894.56
W-812-09	Tnsc <sub>0</sub>	1,703,365	422,910	937.90	939.90	915.60	910.60	921.90	918.90	909.80
W-812-1929	Tnbs <sub>1</sub> /Tnbs <sub>0</sub>	1,703,062	423,376	1010.57	1012.57	946.57	936.57	956.07	950.57	935.77
W-834-S1	Tpsg	1,709,791	418,987	999.08	1002.08	971.58	966.58	NA	981.08	966.58
W-834-S4	Tpsg	1,710,077	418,788	1024.67	1026.67	978.67	943.67	985.97	984.17	941.17
W-834-D17	Tpsg	1,709,874	419,083	1015.25	1017.22	988.75	984.00	995.05	993.05	983.65
NC7-61	Qal-WBR & Tnbs <sub>1</sub> /Tnbs <sub>0</sub>	1,696,229	426,487	1276.40	1279.37	1230.30	1225.30	1239.90	1236.90	1224.90
NC7-10	Qal-WBR	1,696,489	426,308	1223.33	1226.30	1218.33	1208.33	NA	1221.33	1208.33
W-850-2416	Tnsc <sub>0</sub>	1,695,971	426,490	1298.76	1301.90	1224.76	1214.76	1235.76	1228.76	1214.26
K6-23	Qt-Tnbs <sub>1</sub>	1,698,977	414,437	679.64	680.98	660.34	655.34	669.84	664.14	655.34
K6-17	Qt-Tnbs <sub>1</sub>	1,698,806	414,446	675.41	678.71	663.41	643.41	668.41	666.41	643.41

NA = Not applicable.

Targ	et Sample Date:	05-Aug-2	009	1	Month:	Norm Qtr: 3	3 Norm Y	ear: 2009( )	
WELL ID	!	W-812-19	29		AREA INFO: S300/EWFA/812				
DATE:	05-Aug-20			(DOCUME)	ENT CONTROL) #: AA17141				
PURGE ME	ethod/sample met	THOD:	ĻΫ́ <del>'}}-</del> / GRI	BA	CONTAMINAN	r present:_			
SCREENE	O INTERVAL:	66.30	- 76.30		INTAKE DEPT	PH:		0.00	
рертн ог	DEPTH OF CASING; 77.10				CÀSING DIAM	ETER:	····	5.00	
DEPTH TO	WATER:	56.	14	7	VOLUME FACT	'OR:		1.020	
WATER IN	V CASING (ft):	20.	96	(	CASING VOL	(Gal/Time)	: 21.4×	300 = 64,2 Cal	
TIME PUN	MP ON:	08B			INITIAL FLO	W RATE (Q=	GPM):	2.0	
TIME PUN	MP OFF:	0931		1	MEASURED BY	:FLOW METE	R/) GRAD C	YL./ BUCKET/ OTHER	
TIME	Q GAL PURGED	VOLUMES	рН	TEMP C	sc	mV		DTW	
0853	21,4	1	7.87	23.9	798-2	101		58,38	
0903	47.8	2	7-82	231	800.1	76	l	58,74	
0913	64.2	3	7.86	23.2	800.5	56	(	58,79	
0915			7.87	23.1	800.0	52			
0917		<u> </u>	7.85	73.	६००, उ	52			
SC :	serial 6051	(4	LIBRATED YES/NO YES/NO YES/NO YES/NO	1	SAMPLER /EM PROJECT: SAMPLE PRES		3M	EVA90 RPGTR 3GIV GENT: WA	
			QC LAB(S)	. –	•	QC SAI	MPLE TIME:	-	
	OJECT / AI 3MRPGTR	NALYTICAL CALTEST LLNLICPM	LAB /REG	QUESTED E300.0 MS:U	ANALYSIS/ ):NO3 ISO	QUANTI	TY /T 25	YPE OF CONTAINERS 60 mL Polyethylene 1L PLASTIC Sterilized Polyethylen	

ωl

Revision: 01/30/2009

Tarç	get .	Sample Date:	04-Aug-26	009		Month:	Norm Qtr: 3	Norm Ye	ear: 2009	<i>y</i>
WELL ID	):		W-812-07	**************************************		AREA INFO: S300/EMFA/812				
DATE:		04-Aug-20	09	LOG BOOK	(DOCUME	NT CONTROL)	#:	AA171	10	·
PURGE M	ieth(	D/SAMPLE MET	HQD:	PB / GRI	3A	CONTAMINAN	T PRESENT:_	ND		
SCREENE	IL D	TERVAL:	35.30 -	45.30	<del></del>	INTAKE DEPI	PH:		0.00	
DEPTH O	F ÇA	SING:	46.2	0		CASING DIAM	METER:		5.00	
DEPTH T	O WA	TER:	24.0	00		VOLUME FACT	POR:	···	1,020	
WATER I	N CA	SING (ft):	22.2	0	<del></del>	CASING VOL	(Gal/Time)	22.6	X300=67:	86an
TIME PU	MP C	N;		<u></u>		INITIAL FLO	OW RATE (Q=0	GPM) :		
									BUCKET OTH	ER
TIME	ــــــــــــــــــــــــــــــــــــــ	GAL PURGED	VOLUMES	Нq	TEMP C	sc	mV	OG	DTW	
0827		23.0	\	7.80	22.H	1328	-97	l	D.O.	
<u> </u>		24.								
1046	<u> </u>			7.84	27.6	1354	-97	\	31.27	
METER		SERIAL	# CA	LIBATED		sampler /em	PLOYER:	#i1	va90	
OH :		620511	પ	_ resyno		PROJECT:		330	RP 3GIV	
3C :		<del></del>	<del></del>	YES/NO		SAMPLE PRES	ERVATION/AL	T of REAG	ENT: NA	
₹20:	····	D:W-812-68Y	·	YES/NO	GLSTK,	Linlicpms,	<b>Calteo</b> d san	IPLE TIME:	/170	~-
			J						1049	
			ł						PE OF CONTAINER	
	314	IRP	CALTEST	ı	E300.	0:NO3	1	25	0 mL Polyethyler	ne
		IV	CALTEST		E300.0		1		0 mL Polyethyler	
		iv	CALTEST		E6		3	40	mL Glass VOA vi	.aı
		IV	CALTEST		E833		2 1		1L Amber Glass 1L PLASTIC	
		RP	FGLSTK	.0	MS:L SM922		1	250 mL 9	Sterilized Polye	thyl
		Q.	ried o	ut wel	I. Al	beveel	to reco	ur be	fore Somplu ВА)	ng
		Sı	M9221	SHO,	Sampl	ed other	Sampas	as (GR	BA)	

NOTE:

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 0 gal. Revision: 01/30/2009

Target	Sample Date:	05-Aug-2009	1	Month: Norm Qtr: 3 Norm Year: 2009					
WELL ID:_		W-812-09		AREA INFO:_	NFO: S300/EWFA/812				
DATE:	05-Aug-20	<b>09</b> LOG	BOOK (DOCUMEN	NT CONTROL)	) #:	AA17141			
PURGE MET	HOD/SAMPLE MET	HOD: PB	/ GRBA	CONTAMINANT PRESENT: ND					
SCREENED	INTERVAL:	24.60 - 29	.60	intake depi	TH:	0.00			
DEPTH OF	CASING:	30.40	(	CASING DIAM	ÆTER:	5.00			
DEPTH TO	WATER:	24.93	, , , , , , , , , , , , , , , , , , ,	VOLUME FACT	OR:	1.020	V-3/01 - 3/ 5		
WATER IN	CASING (ft):	947	5,47 (	CASING VOL	(Gal/Time):	1.020 9.76 (x)	300=291/4		
TIME PUMP	ON:			INITIAL FLO	OW RATE (Q≈GI	PM) :			
TIME PUMP	OFF:		1	MEASURED BY	:FLOW METER	RAD CYL. / BUC	KET OTHER		
TIME (	Q GAL PURGED	VOLUMES	ph TEMP C	sc	mV	OG ,	DTW		
0832	5,5	1 8.	32 21.5	1143	81	1 2	9,86		
	_			_					
METER	SERIAL :	# CALIE	RATED S	SAMPLER /EN	MPLOYER:	silva90			
pH :	6(071/9	<u>(                                    </u>	ES/NO I	PROJECT:		3MRP 3GIV			
SC :				SAMPLE PRES	SERVATION/AMT	r of REAGENT:	NA		
mv : H2O:			As/no Es/no						
QC SAMPLE	ID:	QC I	AB(S):		QC SAME	PLE TIME:			
SAMPLE ID	(VERIFY): W	81709	7	TIME COLLEC	TED:	1501			
PROG	JECT / AN	ALYTICAL LAB	/REQUESTED	ANALYSIS/	QUANTITY	Y /TYPE OF (	CONTAINERS		
		CALTEST	E300.0	:NO3	ı		lyethylene		
	3GIV	CALTEST	E300.0		1		lyethylene		
	3GIV	CALTEST	E60		3		ss VOA vial		
			E8330		2 1		er Glass ASS-AMBER		
	3GIV 3GIV	EBERLINE	E90 Mg·II		1		LASTIC		
3GIV LINLICPMS MS:UJ 3MRP FGL5TK SM9221					1		zed Polyethylene		
		Dried	out after	- Arst	(CU) A//c	sweal to re	charge		
		PRIOR +	6 Sampling	for SM	7621:3726				

NOTE:

1

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 0 gal. Revision: 01/30/2009

Target Sampl	e Date: 06-Aug-2	009	, 1	Month:	Norm Qtr: 3	Norm Ye	ar: 2009	
WELL ID:	W-834-D1	.7	;	AREA INFO:		8300/834/	/834CORX	
DATE: 00	5-Aug-2009	LOG BOOK	(DOCUME)	NT CONTROL)	#:	AA18044		
PURGE METHOD/SAM	PLE METHOD:	PB / GRB	λ	CONTAMINAN:	T PRESENT:_	*7	CB-3700	
SCREENED INTERVA	ы: <u>28.77</u>	- 33.52		INTAKE DEPI	?H:		0.00	
DEPTH OF CASING:	33.1	37		CASING DIAM	ETER:		5.00	
DEPTH TO WATER:	DRY			OLUME FACT	OR:		1.020	
TIME PUMP ON:					W RATE (Q≖G			
							L./ BUCKET/ OTHER	
	PURGED VOLUMES				Vm			
				DRY				
				<b></b>		······································		
<del> </del>								
<u> </u>								
L							<u></u>	
METER ph : 60	SERIAL # CA	LIBRATED			PLOYER:			
SC :	434 1	YES/NO		ROJECT:			IP 3HRP ENT: (N) A	
mV :		YES/NO	· ·	MMPDE PRES	EKVALION/AM	T OL KEAGI	PMT: 1717	
H2O:		YESTNO						
00 0311075 85 05 1								
QC SAMPLE ID:8341	7B	QC LAB(S):	FGLST	K, BCLABS-	BAK QC SAM	PLE TIME:_	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
SAMPLE ID (VERIF	v): W-834.	D-17	т	IME COLLEC	TED:			
PROJECT 3mrp	/ ANALYTICAL BCLABS-B					TY /TYPE OF CONTAINERS		
3CMP	BCLABS-B		E300.0 E60		1 3			
3MRP	FGLSTK		SM9221				terilized Polyethylen	

NOTE:

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 0 gal. Revision: 01/30/2009

Tar	get	Sample Date:	04-Aug-20	909		Month:	Norm Qtr: 3	Norm Yea	ar: 2009
WELL II	D:		W-834-81			AREA INFO:	·····	\$300/834/	934DOWNGD
DATE:_	····	04-Aug-20	09	LOG BOOK	(DOCUME	NT CONTROL	) #:	Th1.025	
PURGE !	METHO	DD/SAMPLE MET	HOD:	PB / GPU	AP	Contaminan	T PRESENT:	TCE-18(	000/NO3-130
SCREEN	ED I	TERVAL:	30.80 ~	35.80		INTAKE DEP	TH:	0	.00
DEPTH (	or ci	\sing:	37.0	0		CASING DIA	MÈTER:		3,00
DEPTH S	DEPTH TO WATER;						TOR:	0	.367
		ABING (ft):							
									<del></del>
		er;							/ BUCKET/ OTHER
TIME		GAL PURGED		. Rg .	темр С	SC		OG	DTW_
1000	T_			7,63	21.0	1351	11(	0	
				······································					
				···.					
			,	······································	<u> </u>				
ļ	1			···					
<b></b>	ــــــــــــــــــــــــــــــــــــــ				<u> </u>	<u> </u>	<u> </u>		
METER ph t		SERIAL I		LIBRATED ATES/NO		Sampler /Em Project:	PLOYER:	tram 3011	melli JOTR 3MRPGTR 3CMPGTR
8C +				/YESYNO	4	AMPLE PREE	ervation/am	T of REAGE	NT:
H2O:									
					:		OC SAM	PLE TIME:	-
							·		
P			alytical BCLABS—BA				QUANTIT		E OF CONTAINERS mL Polyethylene
		MPGTR	eclabs-ba	ж	E60		1 3	4 Q 111	L Glass VOA vial
				6M9221 7B0	21:SHO 1 250 mL Sterilized Poly				

Targe	t Sample Date:	04-Aug-2	009	i	Month:	Norm Qtr: 3	Norm Ye	ear: 2009 ( , )(	MI	
WELL ID:		W-834-84			AREA INFO:		s300/834	/834DOWNGD	-/	
DATE:	DATE: 04-Aug-2009 LOG BOOK (DOCUME				NT CONTROL)	#1	AA1804	AA18042		
PURGE METHOD/SAMPLE METHOD: PB / GRBA				<u> </u>	CONTAMINAN'	PRESENT:		ICE-1.5	_	
SCREENED	INTERVAL:	48.30	- 83.30		INTAKE DEPT	'н:	······	0.00		
DEPTH OF	CASING:	83.0	50		CASING DIAM	BTER:		4.50		
	WATER:								<del></del>	
WATER IN	CASING (ft):	5.	08		CASING VOL	(Gal/Time)	5.	08' X . 826=	4.17	
								L./ BUCKET/ OTHE		
TIME	Q GAL PURGED	VOLUMES	На	TEMP C	sc	mV	_OG	DTW	_	
0955	4.2	1	7.76	1	2721	I	1	81.10		
1020	8.4	2	7.79	21.3	2701	152	Ì	83.12		
2029	- 9.2	2.7	7.77	21.4	2674	115	7	83,40		
			DP.	1-01	VΤ					
1115 -	9.3		7.80	22.9	2700	9)	ì	83.15		
			De	OU	7					
METER CALIBRATED SAMPLER /EMPLOYER: ulrech1  pH: GOGS PROJECT: 3CMP 3MRP  SC: YES/NO SAMPLE PRESERVATION/AMT OF REAGENT: NA  WY: YES/NO  H20: YES/NO										
QC SAMPLE	ID:W-834-84		QC LAB(S)	: BCLAB	S-BAK, CALT	rest oc sam	IPLE TIME:		-	
SAMPLE ID	(VERIFY): W	-834	-54	1	TIME COLLEC	TED:	1116		_	
PRO	JECT / A	ALYTICAL	LAB /REG	QUESTED	ANALYSIS/	QUANTIT	עיד/ עין	PE OF CONTAINERS	3	
	3MRP	BCLABS-B		E300.0		1				
	3CMP	BCLABS-B	AK	E60	1	3		40 mL Glass VOA vial		
	3MRP	FGLSTK		SM9221				terilized Polyet	hylene	
3CMP BCLABS-BA		HV	TBO	S	3		IL Amber glass			

note:

1

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 5.69999981 gal.

Revision: 01/30/2009

Target	Sample Date:	06-Aug-2	1009		Month:	Norm Qtr:	3 Norm Y	ear: 2009	WOW
WELL ID:_		NC7-10	····		AREA INFO:		5300/ <b>g</b> we	A/850	Mar
DATE:	06-Aug-2(	009	LOG BOOK	(DOCUME	NT CONTROL	#:	AA171	42	
PURGE METI	HOD/SAMPLE MET	HOD:	PB / CR	BA	CONTAMINAN	T PRESENT:	3н:	1000pCi/L	<del></del>
SCREENED 3	INTERVAL:	7.97 -	17.97		INTAKE DEPI	`H:		0.00	
DEPTH OF (	CASING:	17.9	97	(	CASING DIAM	ETER:		2.00	
DEPTH TO	ATER:	19		VOLUME FACT	'OR:		0.163		
WATER IN C	ASING (ft):	6.				(Gal/Time)			
TIME PUMP	ON:	<b></b>			INITIAL FLO	W RATE (O=0	GPM);		
TIME PUMP ON: INITIAL FLOW RATE (Q=GPM):  TIME PUMP OFF: MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER									
	GAL PURGED					mV		DTW	
1100		ł	7.53		747.4	**	1		
1104	1.1	(	7.48	20.3	741.5	55		11,27	
1107	2.2	2	7.66	20.5	143.6	8		11,39	<u> </u>
mz	3.3	3	1.45	20.7	741.7	64	(	11.44	
				· · · · · · · · · · · · · · · · · · ·					
METER	SERTAL	# CA	LITERATED		SAMPLER /EM	PLOYER:	sil	va90	
pH :	6705	114	YES/NO	1	PROJECT:	ERVATION/A	3M	RP 3GIV	A
mV :			YES/NO	•				<del></del>	
	ID: <b>850FB</b>	····	-		ame assert	pm (10 92)	wete TIME:	1121	
QC SAMPLE	(VERIFY): \(\lambda\)	-1 - In	GC LAB(S)	·	DING COLLEC	mpn.	111	Ll	
PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS/ QUANTITY /TYPE OF CONTAINERS  3MRP CALTEST E300.0:NO3 1 250 mL Polyethylene  PROJECT / ANALYTICAL LAB /REQUESTED ANALYSIS/ QUANTITY /TYPE OF CONTAINERS  1 250 mL Polyethylene									
	3GIV 3MRP	CALTES FGLST		E300.0 SM922		. 1	250 mL	Sterilized	Polyethylene
		5	and led	NO3 1	fore as	GABA.	Sampled	SM122/	<b>a</b> -
			30134,						

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 5 gal. Revision: 01/30/2009

Targ	get S	Sample Date:	06-Aug-2	009	1	Month:	Norm Qtr: :	Norm Y	ear: 2009( W/	
WELL ID	);	······································	NC7-61			AREA INFO:_		S300/EWF	A/850	
DATE:		06-Aug-20	09	rog Book	(DOCUME)	NT CONTROL)	#:	AA171	42	
PURGE M	ETHC	D/SAMPLE MET	HOD:	PB / GRI	3 <b>X</b>	CONTAMINAN	r present:_	RDX-6/9H>	1000pCi/L/NO3-97	
SCREENE	D IN	TERVAL:	49.07 -	54.07		INTAKE DEPT	'H:	0.00		
									4.50	
DEPTH T	O WA	TER:	48,5	2	······································	VOLUME FACT	OR:	······································	0.826	
TIME PU	MP C	N:			:	INITIAL FLO	W RATE (Q=	GPM):		
		FF:		<u> </u>	1	MEASURED BY	:FLOW METE	R/ CRAD C	YL. BUCKÉT OTHER	
TIME	<u> </u>	GAL PURGED	VOLUMES	рн	TEMP C	sc	m∨	OG	DTW	
10/8	<u> </u>	6.55.0	1	7.41	19.5	798,3	68		Ŋο	
1053		45		1.39	19.8	798,6	46	ţ	53,70	
						-		<u> </u>		
								<u></u>		
	-									
METER		SERIAL (	CA	LIBRATED WES/NO		SAMPLER /EM			Lva90 MG 3MRP	
sc :		······································		YES/NO				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	GENT: NA	
nV : 120:				YES/NO YES/NO						
OC SAMPI	Æ II	):NC7-89Y			<b>₩</b> /27,0/1	W. BOLLES.	<b>ምል</b> ሄ ብሮ ፍለነ	ים אדת ביום א	1027	
				/						
			- /						353	
PF									YPE OF CONTAINERS	
3MRP BCLABS~BAK E300.0 3EMG BCLABS~BAK E300.0						PERC	1	25	0 mL Polyethylene 0 mL Polyethylene	
3MRP FGLSTK SM9221:SHC							*		Sterilized Polyethyl	

Sampled NO3/PERC as book. Dried out well them Sampled Smazzi: SHO

Revision: 01/30/2009

	DATE:		06-Aug-2	009	rog Book	(DOCUME)	T CONTROL)	#:	AA1714	2
	PURGE MI	етно	D/SAMPLE ME	THOOH;	WW / GRI	BA	CONTAMINAN	r present:		TCE-1.1
	SCREENEI	D IN	TERVAL:	15.30	- 35.30	1	PUMP INTAKE	33.00		
	DEPTH O	r ca	SING:	37.	30		CASING DIAM	ETER:	<u></u>	4.50
	DEPTH TO	AW C	TER:	24.	24		OLUME FACT	'SR:: RO'		0.826
ļ	WATER II	N CA	SING (ft):_	13.	06		CASING VOL	(Gal/Time)	16.8	
	rime pui	MP O	N:	0844		-	INITIAL FLO	W RATE (Q=0	GPM):	
,	TIME PUN	4P O	FF:	*****			MEASURED BY	:FLOW METER	R/GRAD CY	L. BUCKET) OTHER
			GAL PURGEL				sc		OG	DTW
	0889		11		7-21	21.0	1756	71	1	33.61
	0917		13.5		7.49	20.7				0,0
	0946				7.49	20.7	1767	50		31.62
		***************************************								
ſ										
~ !	ETER		SERIAL	# C2	LIBRATED	9	AMPLER /EM	PLOYER:	sil	va90
ŗ	H :	<del></del>	6105	114	KES/NO	F	ROJECT:	***************************************	301	ENT: UA
π	V :				YES/NO	~	AMPLE INES	ENVALLOW, RE	01 112,10	
			: K6~95Y						OLD BING.	1017
			ERIFY):		,					(8
				· · · · · · · · · · · · · · · · · · ·	-	<del></del>				••••
	PK	3M	RP	BCLABS-B	AK	E300.0	:NO3	1	25	(PE OF CONTAINERS O mL Polyethylene
		3C			AK AK			1 3	25	0 mL Polyethylene mL Glass VOA via
		3C		EBERLIN		E90		1		50mL GLASS-AMBER
		3M		FGLSTK		SM9221		1		Sterilized Polyet

Revision: 01/30/2009

well to	et Sample Dat	_			Month: 1			1 100	
					AREA INFO: \$300/PIT6/PIT6  MENT CONTROL) #: AA17142				
								ND	
screened	INTERVAL:	20.94	- 25.94		INTAKE DEPT	Н:	0	.00	
DEPTH OF	CASING:	25	. 94	(	CASING DIAM	eter:		4.50	
DEPTH TO	WATER:	27	54		VOLUME FACT	OR:		,826	
VATER IN	CASING (ft)	:3	4	(	CASING VOL	(Gal/Time)	:_Z.8		
PIME PUM	P ON:				INITIAL FLO	w rate (Q=	GPM) :	····	
		-		1	MEASURED BY	:FLOW METE	R/ RRAD CYL	BUCKET OTHER	
TIME	Q GAL PURG	ED VOLUMES	Hq	TEMP C	sc	mV	OG	DTW	
0836	2.5		6.78	21.2	8629	61	(	DO.	
932			6.82	21,0	7293	57		24,87	
ETER	SERI <i>A</i>	L# . C	ALI#RATED	5	SAMPLER /EMI	PLOYER:	silv	<b>490</b>	
H :	SERIA 6	2051/4	TEE/NO	Ŧ	ROJECT:		3CM	P 3MRP NT: NAL	
<del></del>	······································	······································		•					
	e to.				*******	OC 53	MDT.R TTMR.		
	(VERIFY):		1						
			ſ						
PRC	3MRP		l lab /ki BAK			1	250	PE OF CONTAINERS  mL Polyethylene	
	3CMP 3CMP	BCLABS-		E60		3		nL Glass VOA vial	
		EBERLI	NE	E90	סי	1		OmL GLASS-AMBER cerilized Polyethy	

NOTE:

Purge rate/time: N/A since est\_sus\_flow = 0

Purge Volume: 2.2 gal. Revision: 01/30/2009

#### **Appendix C**

**Mechanical Equipment Room and Cooling Tower Percolation Pit Inspection Forms** 

#### Mechanical Equipment Percolation Pits Inspection Checklists

Inspector MACK

Date 1-20-2009

Crawls Building Number 906

·		
Instructions: Circle the appropriate response f descriptions and comments if necessary. Atta		
This record is to be maintained by the Inspecti available by request of EPD or regulatory pers		or a minimum of 5 years and made
Send a completed copy to the attention of Rich	nard Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	V
Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.	€	
Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No.	
If yes to any of the above, note date, actions taken, and type of repairs when made.	5	
Supervisor's Signature Libert ha	t.	Date <u>/-20-09</u>

Revision 3 10/08 ksf

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date	4/29/09	Inspector	MARK	KRAUAS	Building N	Number	806
deso This	riptions and comm	ents if necess ntained by the	ary. Attac Inspectin	h additional pap g Organization f	ow, and record the da er if extra space is no or a minimum of 5 ye	eeded.	
Sen	d a completed copy	to the attention	on of Richa	ard Blake, PRAD	) (L-627), EPD.		
1. 2. If y EC arrr ag 3.	Is water flowing from there any sign (damp dirt around res is indicated to end ange for reporting the end and sample control is there standing whom?	ns of recent on Christy box)? ither 1 or 2, co 110) immediat to the regulate ollection. water in the C note depth a equency to mo	verflow Pontact the ely to ory hristy nd	Response Yes/No Yes/No	Description and Co	omments:	
4. If y	Are there any other percolation pit req (e.g., excessive be accumulation of des to any of the aben, and type of rep	er indications uires mainten uild up scale, irt or debris). ove, note date	ance e, actions	Yes(No)			
Supervisor's Signature Works Date 4/-				41-2	9-09		

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Inspector \_

Building Number 827 A

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richar	d Blake, PRAL	O (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/Mo	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/🕼	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Habit 4. Sala</u>	lyha-	Date

Revision 3 10/08 ksf

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Building Number <u>827</u>

Inspector A. Fontes

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richard	d Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/😡	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/Nø	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted.		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/(vo)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature 14th	Jahr -	Date <u>/'/2'09</u>

<sup>\*</sup> Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date $1/12/09$ Inspector A. For	tes	Building Number §27D
Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach This record is to be maintained by the Inspecting available by request of EPD or regulatory person	additional paper of the distribution of the di	per if extra space is needed.
Send a completed copy to the attention of Richar	d Blake, PRAI	D (L-627), EPD.
Check Items	Response	Description and Comments:
<ol> <li>Is water flowing from the Christy box?</li> </ol>	Yes	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes (No	·
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/N/	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted.		· · · · · · · · · · · · · · · · · · ·
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/Ng	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Yatual 4. Sala</u>	9/1/1/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/	Date <u>1:12:09</u>

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date 1/12/09	Inspector <u>A.</u>	Fortes	Building Number	8276
			ow, and record the date and ti per if extra space is needed.	me. Provide
This record is to be main available by request of E			for a minimum of 5 years and	made
Send a completed copy t	o the attention of Ric	chard Blake, PRAD	) (L-627), EPD.	
Check Items		Response	Description and Comments	<u>:</u>
1. Is water flowing fro	m the Christy box?	Yes/M		
Are there any signs     (damp dirt around)		Yes/No	A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>
If yes is indicated to eit EDO and PRAD (2-991 arrange for reporting to agency and sample col	0) immediately to the regulatory	ne		
3. is there standing w box?	ater in the Christy	Yes <i>i</i> (No)		
If yes is indicated in 3, increase inspection freduntil no water is noted				
<ol> <li>Are there any other percolation pit requ (e.g., excessive bui accumulation of dire</li> </ol>	ires maintenance Id up scale,	Yes/N		
If yes to any of the abotaken, and type of repa		ាន		
Supervisor's Signeture	Anti-Ma	# 82 M. h.	Date 1:/2	·19

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date 4/1/09 Inspector Agran T. Fortes Building Number 827A

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richar	d Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes(No)	, , , , , , , , , , , , , , , , , , , ,
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes(No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes(No)	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Falaul J. Wa</u>	Magher	Date

<sup>\*</sup> Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

faron T. Fintes Building Number 827C

Instructions: Circle the appropriate response for	anah itam hali	ow and record the date and time. Provide
descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richard	d Blake, PRAI	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes(No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes(No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Faturit 4. Da</u>	Magher	Date <u>4709</u>

10/08 ksf

Date 4/1/09

<sup>\*</sup> Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

form (- Fontes Building Number 827D

	ons: Circle the appropriate response for ions and comments if necessary. Attach		w, and record the date and time. Provide er if extra space is needed.
	ord is to be maintained by the Inspecting by request of EPD or regulatory personi		or a minimum of 5 years and made
Send a c	completed copy to the attention of Richard	d Blake, PRAD	(L-627), EPD.
Check It	<u>ems</u>	Response	Description and Comments:
1. Is	water flowing from the Christy box?	Yes/No	
	e there any signs of recent overflow amp dirt around Christy box)?	Yes(No	
EDO a arrang	s indicated to either 1 or 2, contact the nd PRAD (2-9910) immediately to e for reporting to the regulatory and sample collection.		
3. Is to	there standing water in the Christy x?	(Yes/No	2" of water.
increas	s indicated in 3, note depth and se inspection frequency to monthly water is noted		
per (e.g	e there any other indications that the recolation pit requires maintenance g., excessive build up scale, cumulation of dirt or debris).	Yes <i>[</i> No)	
	o any of the above, note date, actions and type of repairs when made.		
Supervisc	or's Signature <u>1211111 4. 1</u>	dalague.	Date <u>47.09</u>

Revision 3 10/08 ksf

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

( Fartes Building Number 8275

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richar	d Blake, PRAI	O (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/KiD	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Yallala (</u>	Salleya.	

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date $\frac{5/27/09}{A \cdot Fo}$ Inspector $A \cdot Fo$	ntes	Building Number 827 A
Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory persor		for a minimum of 5 years and made
Send a completed copy to the attention of Richard	rd Blake, PRAI	D (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes(No)	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes(No)	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes(No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature Palad 4. Nath	pp fr	Date 6.7.09

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date <u>5/27/09</u> Inspector <u>A - F</u>	entes	Building Number 827C
Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach	each item bel additional pap	ow, and record the date and time. Provide per if extra space is needed.
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richar	d Biake, PRAI	D (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/Mo	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature	Martin.	Date 67.29

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date <u>5/27/09</u> Inspector A F	ontes	Building Number 8274
Instructions: Circle the appropriate response to descriptions and comments if necessary. Attack		
This record is to be maintained by the Inspectin available by request of EPD or regulatory personal contents.		for a minimum of 5 years and made
Send a completed copy to the attention of Richa	ard Blake, PRA[	O (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/I©	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/Ka	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
•	,	
Supervisor's Signature	Sellenthi.	Date 4:1:09

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date 5/2//09 Inspector A.A.	ontes	Building Number X / / /
Instructions: Circle the appropriate response fo descriptions and comments if necessary. Attac	r each item bel h additional paj	ow, and record the date and time. Provid per if extra space is needed.
This record is to be maintained by the Inspectin available by request of EPD or regulatory perso		for a minimum of 5 years and made
Send a completed copy to the attention of Richa	ırd Blake, PRAI	D (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/100	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(vo)	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
Is there standing water in the Christy box?	Yes/Ko	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/(G)	
If yes to any of the above, note date, actions taken, and Jype of repairs when made.		
de la companya de la		
Suppositionario Signatura	5. III.	Data 1:1:27

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date $8/12/09$ Inspector Acron	II- Faul	827A  Building Number
Instructions: Circle the appropriate response for descriptions and comments if necessary. Attac	or each item bel h additional par	ow, and record the date and time. Provide per if extra space is needed.
This record is to be maintained by the Inspectin available by request of EPD or regulatory perso		for a minimum of 5 years and made
Send a completed copy to the attention of Richa	ard Blake, PRA[	O (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/(10)	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisorie Signature ANTAIN A	Vallend .	/ note 0/2:49

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richar	d Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(Vo)	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/Ŋò	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature 1914, 19	Martin	

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Revision 3

Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide

descriptions and comments if necessary. Attach additional paper if extra space is needed.

Building Number 8275

10/08 ksf

available by request of EPD or regulatory personners	~	for a minimum of 5 years and made
Send a completed copy to the attention of Richard	d Blake, PRAD	O (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/Md	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Jawa 4 Ja</u>	May be	

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

T. Fantes Building Number 827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.  This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.  Send a completed copy to the attention of Richard Blake, PRAD (L-627), EPD.  Check Items  Response  Description and Comments:  1. Is water flowing from the Christy box?  2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	•		
available by request of EPD or regulatory personnel.  Send a completed copy to the attention of Richard Blake, PRAD (L-627), EPD.  Check Items  Response  Description and Comments:  1. Is water flowing from the Christy box?  2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.			
Check Items  1. Is water flowing from the Christy box?  2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.			for a minimum of 5 years and made
1. Is water flowing from the Christy box?  2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	Send a completed copy to the attention of Richa	ard Blake, PRA[	O (L-627), EPD.
2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	Check Items	Response	Description and Comments:
(damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	1. Is water flowing from the Christy box?	YesMo	
EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.		Yes(No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory		
increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	•	Yes/No	
percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	increase inspection frequency to monthly		
taken, and type of repairs when made.	percolation pit requires maintenance (e.g., excessive build up scale,	Yes/No	
Supervisor's Signature 1414/14 Automatical Date 8/2/47	- · · · · · · · · · · · · · · · · · · ·		
	Supervisor's Signature <u>Hanal John</u>	Maria	Date 8/12/97

Revision 3 10/08 ksf

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide

**Building Number** 

descriptions and comments if necessary. Attacr	i additional pal	рег п ехта space is пеедей.
This record is to be maintained by the Inspecting available by request of EPD or regulatory persor		for a minimum of 5 years and made
Send a completed copy to the attention of Richa	rd Blake, PRAI	O (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Juditivi 7.7%</u>	Mystal.	

Revision 3 10/08 ksf

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide

foran T. Furtes Building Number 827C

descriptions and comments if necessary. Attack	n additional pap	per if extra space is needed.
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richa	rd Blake, PRAD	O (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/NO	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes(No)	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Julin's J. Jah</u>	Miles	Date <u>//-//-/46-09</u>

Revision 3 10/08 ksf

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date 11/11/09 Inspector Aarant. Fortes Building Number 80

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory persor		or a minimum of 5 years and made
Send a completed copy to the attention of Richard	d Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	YealNo	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No)	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		(
3. Is there standing water in the Christy box?	Yes/No	4 ob water
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature 1800 - 1900	1	

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date 11/11/09 Inspector Aoron	1- Fonts	Building Number	827E
Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach			. Provide
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and ma	ade
Send a completed copy to the attention of Richar	d Blake, PRAI	O (L-627), EPD.	
Check Items	Response	Description and Comments:	
1. Is water flowing from the Christy box?	Yes <b>⁄</b> No		
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No		
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.			
3. Is there standing water in the Christy box?	Yes (No)		
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted			
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/(No		
If yes to any of the above, note date, actions taken, and type of repairs when made.			
Supervisor's Signature <u>Jahraha</u>		Date	<u> </u>

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Revision 3

82715

Date 12/16/09 Inspector faron T. Fontes Building Number 8274

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richar	d Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	YesNo	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No)	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature 1911	de la companya de la	Date 127/29

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Revision 3

- fontes Building Number

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richard	rd Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	YesAlo	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		<i>1</i> 1
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Falland Jan</u>	Marine 1	Date

Revision 3 10/08 ksf

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide

descriptions and comments if necessary. Attach	n additional pap	per if extra space is needed.
This record is to be maintained by the Inspecting available by request of EPD or regulatory persor		for a minimum of 5 years and made
Send a completed copy to the attention of Richa	rd Blake, PRAD	O (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes 🕼	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No)	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		o "
3. Is there standing water in the Christy box?	YesAvo	3'
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
<b>.</b> •		
Supervisor's Signature <u>Takwaia J. Ja</u>	Magain_	

Revision 3 10/08 ksf

Date 12/16/09 Inspector Aaron T. Forts Building Number 827E

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richard	d Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/Ø	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/Ko	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	YeaNo	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Ye s/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature <u>Jüliah / Jan</u>	Marine -	Date 12:11:09

Revision 3 10/08 ksf

### **Cooling Tower Inspection Checklists**

Date	<u> </u>	MURUM	Building Number	801
	uctions: Circle the appropriate response for riptions and comments if necessary. Attact			ne. Provide
	record is to be maintained by the Inspectin able by request of EPD or regulatory perso		for a minimum of 5 years and r	nade
Send	d a completed copy to the attention of Richa	ard Blake, PRAD	) (L-627), EPD.	
Chec	ck Items	Response	Description and Comments:	
1.	Is water flowing from the Christy box?	Yes/Nø		
2.	Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/Mo		·
ED arr	es is indicated to either 1 or 2, contact the O and PRAD (2-9910) immediately to ange for reporting to the regulatory ency and sample collection.			
3.	Is there standing water in the Christy box?	Yes/No		
inc	es is indicated in 3, note depth and rease inspection frequency to monthly il no water is noted			
4.	Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No		
	es to any of the above, note date, actions en, and type of repairs when made.	·		
	•	•		
Super	visor's Signature		Date	
.د م.				

Building Number

Inspector O. LAUDEUM

	tions: Circle the appropriate response for entions and comments if necessary. Attach		
	cord is to be maintained by the Inspecting leby request of EPD or regulatory personn		or a minimum of 5 years and made
Send a	completed copy to the attention of Richard	i Blake, PRAD	) (L-627), EPD.
Check	<u>Items</u>	Response	Description and Comments:
1. Is	s water flowing from the Christy box?	Yes/Mo	
	Are there any signs of recent overflow damp dirt around Christy box)?	Yes/N <b>bs</b> .	
EĎO arran	is indicated to either 1 or 2, contact the and PRAD (2-9910) immediately to ge for reporting to the regulatory cy and sample collection.		
	s there standing water in the Christy ox?	Yes/tota	
increa	is indicated in 3, note depth and ase inspection frequency to monthly no water is noted		
р( (е	re there any other indications that the ercolation pit requires maintenance e.g., excessive build up scale, ccumulation of dirt or debris).	Yes/ <b>b/f</b> s.	
	to any of the above, note date, actions, and type of repairs when made.		
Supervis	sor's Signature		Date

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Revision 3

Date 4-21-09

Date	7-29-09	Inspector _	0.	LAUDANA	a	Building Number	801
This avail	riptions and comme	nts if necessantsined by the PD or regulate	ry. Atta Inspecti ory pers	ch additional papeng ng Organization foonnel.	er if extra : or a minim	ium of 5 years and r	
<u>Chec</u>	k Items Is water flowing fro	om the Christy	box?	Response Yes No	Descript	tion and Comments	
2.	Are there any sign (damp dirt around		erflow	YeaNo	<u>.,,</u>		
ED arr	es is indicated to ei O and PRAD (2-99 ange for reporting to ency and sample co	10) immediate the regulator	ly to	e			
3.	Is there standing wbox?	vater in the Ch	risty	YesANo			
inc	es is indicated in 3, rease inspection fre il no water is noted					an (WW)	
4.	Are there any othe percolation pit required (e.g., excessive but accumulation of dispersion of the percolation pit requirements and the percolation pit requirements are percolation pit requirements.	uires maintena ild up scale,		Yes/(Vi)			
lf y tak	es to any of the abo en, and type of repa	ove, note date irs when mad	, actions e.	<b>.</b>	-		
Supe	rvisor's Signature					Date	

<sup>\*</sup> Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date	1-28-09	Inspector	D.	1	ANDRU	<u> </u>	Building Number	809
descr This r	iptions and comme	nts if necessa tained by the	iry. Atta Inspect	ach a ting (	additional par Organization	er if extra	ecord the date and tin space is needed. num of 5 years and r	
Send	a completed copy t	o the attentio	n of Ric	chard	Blake, PRAI	D (L-627),	EPD.	
1. 2. If ye EDO arra age	k Items  Is water flowing fro  Are there any signs (damp dirt around of es is indicated to eit O and PRAD (2-991) ange for reporting to ency and sample col Is there standing w	s of recent ov Christy box)? her 1 or 2, co 10) immediate the regulator llection.	erflow Intact thely to	ne	Response Yes/No Yes/No		otion and Comments	· · · · · · · · · · · · · · · · · · ·
incr	box? es is indicated in 3, ease inspection fred I no water is noted					<u> </u>		
lf ye	Are there any other percolation pit requies, excessive but accumulation of direct to any of the aboundary and type of reparts.	uires maintena ild up scale, t or debris). ove, note date	ance e, actior		Yes/(Ño			
Supe	visor's Signature						Date	· · · · · · · · · · · · · · · · · · ·

Date <u>4-22-09</u> Inspector <u>0.1</u>	WALLA	Building Number	109
Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach This record is to be maintained by the Inspecting available by request of EPD or regulatory persons. Send a completed copy to the attention of Richard	additional pap Organization f nel.	er if extra space is needed. or a minimum of 5 years and mad	
Check Items  1. Is water flowing from the Christy box?	Response Yes/N/o	Description and Comments:	
Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/Ne-		
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.			
3. Is there standing water in the Christy box?	Yes/Mo.		
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted			
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/ <b>N</b> o_		
If yes to any of the above, note date, actions taken, and type of repairs when made.	·		
Supervisor's Signature		Date	

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Building Number

Inspector D. LANDLUM

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory personness.		for a minimum of 5 years and made
Send a completed copy to the attention of Richard	d Blake, PRAI	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/N	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/N	***************************************
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes <b>(N</b> )	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
•		
Supervisor's Signature		Date
	. ,	

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date 7. 29-09

Inspector

Date /- 28-09

D. LAUDAUM Building Number 8/2

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory persons		for a minimum of 5 years and made
Send a completed copy to the attention of Richard	d Blake, PRAI	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/😡	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/Mb	, , , , , , , , , , , , , , , , , , ,
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/tvo	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/Ñø	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature		Date
		<del></del>

Date	4-21-09	Inspector	Di	LAVOREM	Building Number	812
					w, and record the date and ti er if extra space is needed.	me. Provide
This ravaila	ecord is to be maint ble by request of EF	ained by the In D or regulator	specti y pers	ng Organization f onnel.	or a minimum of 5 years and	made
Send	a completed copy to	the attention of	of Rich	nard Blake, PRAD	(L-627), EPD.	
Chec	<u> ( Items</u>			Response	Description and Comments	<u>:</u>
1.	Is water flowing from	n the Christy b	ox?	Yes/No		
2.	Are there any signs (damp dirt around C		low	Yes/No		
ED0 arra	es is indicated to eith D and PRAD (2-9910) nge for reporting to ncy and sample colle	immediately     the regulatory		•		
	ls there standing wa	ter in the Chris	ity	Yes/No		
incre	s is indicated in 3, nease inspection freq no water is noted		nly		)—————————————————————————————————————	· · · · · · · · · · · · · · · · · · ·
	Are there any other percolation pit requires, excessive build accumulation of dirt	es maintenand d up scale,		Yes/ <b>l/f6</b>		
	s to any of the abov n, and type of repair		ctions			
Superv	visor's Signature				Date	

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Revision 3

812

Inspector D. Langua

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.			
This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.			
Send a completed copy to the attention of Richard Blake, PRAD (L-627), EPD.			
Check Items	Response	Description and Comments:	
1. Is water flowing from the Christy box?	Yes/🍪		
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/ <b>M</b> 6	· · · · · · · · · · · · · · · · · · ·	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.			
3. Is there standing water in the Christy box?	Yes/Ko		
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted			
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/ <b>M</b> g		
If yes to any of the above, note date, actions taken, and type of repairs when made.			
Supervisor's Signature		Date	

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Revision 3

Date 7-25-09

Building Number 8/2

Date	e $\sqrt{-28-09}$ Inspector $0$ , $1$	ANDRUI	27 Building Number	817
	ructions: Circle the appropriate response for criptions and comments if necessary. Attach			Provide
This avai	record is to be maintained by the Inspecting lable by request of EPD or regulatory person	Organization f	or a minimum of 5 years and mad	de
Sen	d a completed copy to the attention of Richar	d Blake, PRAD	) (L-627), EPD.	
Che	<u>ck Items</u>	Response	Description and Comments:	
1.	Is water flowing from the Christy box?	Yes(No)		
2.	Are there any signs of recent overflow (damp dirt around Christy box)?	Yes(No)		
EĽ an	yes is indicated to either 1 or 2, contact the DO and PRAD (2-9910) immediately to range for reporting to the regulatory ency and sample collection.			
3.	Is there standing water in the Christy box?	Yes.No		<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>
ind	ves is indicated in 3, note depth and crease inspection frequency to monthly til no water is noted			
4.	Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No		
lf y tak	es to any of the above, note date, actions en, and type of repairs when made.			
Supe	rvisor's Signature		Date	<u></u>

D. LANDAGM Building Number \_

Date $4-22-09$ Inspector $D$ .	LANDA	819 Building Number	-/
Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach	each item belo additional pap	ow, and record the date and time. Provi	de
This record is to be maintained by the Inspecting available by request of EPD or regulatory personness.	Organization for the contraction of the contraction	for a minimum of 5 years and made	
Send a completed copy to the attention of Richard	d Blake, PRAD	O (L-627), EPD.	
Check Items	Response	Description and Comments:	
1. Is water flowing from the Christy box?	Yes/No		
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/Na	.'	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.			
3. Is there standing water in the Christy box?	Yes/No		
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		·	
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No		_ _ _
If yes to any of the above, note date, actions taken, and type of repairs when made.			_
Supervisor's Signature		Date	

Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Revision 3

D. Lensenn

Instructions: Circle the appropriate response for edescriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory personness.		or a minimum of 5 years and made
Send a completed copy to the attention of Richard	d Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/M3	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/ <b>l</b> ∯	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		· · · · · · · · · · · · · · · · · · ·
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/Mo)	
If yes to any of the above, note date, actions taken, and type of repairs when made.	·	
•		
The strength of the state of th		
Supervisor's Signature	· · · · · · · · · · · · · · · · · · ·	Date

7-25-09

Date

Inspector

817-A

**Building Number** 

<sup>\*</sup> Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date /- 28 - 69 Inspector 0. /	ANDRU M	Building Number 826
Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach  This record is to be maintained by the Inspecting available by request of EPD or regulatory persons	additional paparetion for	er if extra space is needed.
Send a completed copy to the attention of Richard		) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/Nø	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
<u> </u>		
Supervisor's Signature		Date

Inspector

LANDRUM

Building Number 826

Instructions: Circle the appropriate response for edescriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory personness.		or a minimum of 5 years and made
Send a completed copy to the attention of Richard	d Blake, PRAD	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	·
If yes to any of the above, note date, actions taken, and type of repairs when made.		
•		
Supervisor's Signature		Date
	• •	

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Revision 3

Inspector

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.  This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.  Send a completed copy to the attention of Richard Blake, PRAD (L-627), EPD.  Check Items  Response  Description and Comments:  1. Is water flowing from the Christy box?  2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.  Supervisor's Signature  Date	instructions: Circle the appropriate response for	each item held	www.and.record.the.date.and.time Provide
available by request of EPD or regulatory personnel.  Send a completed copy to the attention of Richard Blake, PRAD (L-627), EPD.  Check Items  Response  1. Is water flowing from the Christy box?  2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	descriptions and comments if necessary. Attach	additional pap	er if extra space is needed.
Check Items  1. Is water flowing from the Christy box?  2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.			or a minimum of 5 years and made
1. Is water flowing from the Christy box?  2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	Send a completed copy to the attention of Richard	d Blake, PRAD	(L-627), EPD.
2. Are there any signs of recent overflow (damp dirt around Christy box)?  If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	Check Items	Response	Description and Comments:
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	1. Is water flowing from the Christy box?	Yes/No	
EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.  3. Is there standing water in the Christy box?  If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.		Yes/ <b>M</b> o	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory		
increase inspection frequency to monthly until no water is noted  4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.		Yes/ <b>Ø</b> ø	
percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).  If yes to any of the above, note date, actions taken, and type of repairs when made.	increase inspection frequency to monthly		
taken, and type of repairs when made.	percolation pit requires maintenance (e.g., excessive build up scale,	Yes/(Ū)	
Supervisor's Signature Date	If yes to any of the above, note date, actions taken, and type of repairs when made.		
Supervisor's Signature Date			
Supervisor's Signature Date			
	Supervisor's Signature		Date

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Building Number 826

Date  $\sqrt{-28-09}$  Inspector

LANDRUM Building Number

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory person		for a minimum of 5 years and made
Send a completed copy to the attention of Richard	rd Blake, PRAI	) (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/Mo	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes(Nd	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
,		
Supervisor's Signature		Date

Revision 3 10/08 ksf

Date 4-22-09 Inspector 0.

LANDRUM Building Number 827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.  This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.		
Send a completed copy to the attention of Richar	u biake, PKAD	(L-021), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No-	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/Ne	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted	. •	
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
•		
COMMINISTRATION COMMINISTRATION AND COMMINISTRATION COMMINISTR		
Supervisor's Signature		Date

Inspector D. Janozan

ì	nstructions: Circle the appropriate response for	each item helo	w and record the date and time	Provide
	escriptions and comments if necessary. Attach			TOVIGE
T	his record is to be maintained by the Inspecting vailable by request of EPD or regulatory person	Organization fondel.	or a minimum of 5 years and made	€
S	Send a completed copy to the attention of Richar	rd Blake, PRAD	(L-627), EPD.	
<u>C</u>	check Items	Response	Description and Comments:	
	1. Is water flowing from the Christy box?	Yes/No		
	2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No		······································
	If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.			
	3. Is there standing water in the Christy box?	Yes/No		
	If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted			
	4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/Mp		
	If yes to any of the above, note date, actions taken, and type of repairs when made.			
S	upervisor's Signature		Date	
	The state of the s	A CONTRACTOR OF THE PARTY OF TH	and the second s	

Building Number 827-A

<sup>\*</sup> Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Dat	e $\sqrt{-28-09}$ Inspector $\sqrt{D}$ . $\sqrt{D}$	AUDRUM	Building Number _	851
	ructions: Circle the appropriate response for criptions and comments if necessary. Attach			e. Provide
	record is to be maintained by the Inspecting ilable by request of EPD or regulatory person		for a minimum of 5 years and m	nade
Sen	d a completed copy to the attention of Richard	d Blake, PRAD	) (L-627), EPD.	
<u>Che</u>	ck Items	Response	Description and Comments:	
1.	Is water flowing from the Christy box?	Yes/No		
2.	Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No		
Ei ar	yes is indicated to either 1 or 2, contact the DO and PRAD (2-9910) immediately to range for reporting to the regulatory ency and sample collection.			
. 3,	Is there standing water in the Christy box?	Yes/No		<u></u>
inc	ves is indicated in 3, note depth and crease inspection frequency to monthly til no water is noted			
4.	Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/🐿		
If y tak	res to any of the above, note date, actions ten, and type of repairs when made.	,		
	•			
Supe	rvisor's Signature		Date	
-	·			

Date 4-21-09 Inspector D. LAUDRAM Building Number

Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach		
This record is to be maintained by the Inspecting available by request of EPD or regulatory personn		for a minimum of 5 years and made
Send a completed copy to the attention of Richard	l Blake, PRAD	O (L-627), EPD.
Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
<ol><li>Are there any signs of recent overflow (damp dirt around Christy box)?</li></ol>	Yes/No	
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted		
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/ <b>N</b> o	
If yes to any of the above, note date, actions taken, and type of repairs when made.		
•		
Supervisor's Signature		Date

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Revision 3

Date 4-22-09 Inspector D. LAUDAUM

	uctions: Circle the appropriate response for experience and comments if necessary. Attach		
	record is to be maintained by the Inspecting able by request of EPD or regulatory personn		or a minimum of 5 years and made
Sen	d a completed copy to the attention of Richard	d Blake, PRAD	(L-627), EPD.
<u>Che</u>	ck Items	Response	Description and Comments:
1.	Is water flowing from the Christy box?	Yes/No	
2.	Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	.'
El ar	yes is indicated to either 1 or 2, contact the DO and PRAD (2-9910) immediately to range for reporting to the regulatory ency and sample collection.		
3.	Is there standing water in the Christy box?	Yes/No	
ind	yes is indicated in 3, note depth and crease inspection frequency to monthly til no water is noted		
4,	Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
	yes to any of the above, note date, actions cen, and type of repairs when made.		
	•		
Supe	ervisor's Signature		Date

\* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Building Number 85/

Date <u>7-27-6ς</u> Inspector <u></u> <u> </u>	LAUDEL	Building Number 85/							
Instructions: Circle the appropriate response for descriptions and comments if necessary. Attach	additional pape	er if extra space is needed.	е						
This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.									
Send a completed copy to the attention of Richard Blake, PRAD (L-627), EPD.									
Check Items	<u>Response</u>	Description and Comments:							
1. Is water flowing from the Christy box?	Yes/No								
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/Nø								
If yes is indicated to either 1 or 2, contact the EDO and PRAD (2-9910) immediately to arrange for reporting to the regulatory agency and sample collection.									
3. Is there standing water in the Christy box?	Yes/No		_						
If yes is indicated in 3, note depth and increase inspection frequency to monthly until no water is noted	. •		_						
<ol> <li>Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).</li> </ol>	Yes/ <b>(</b> 00		_ _ _						
If yes to any of the above, note date, actions taken, and type of repairs when made.	· · · · · · · · · · · · · · · · · · ·		_						
The state of the s									
Supervisor's Signature		Date							

<sup>\*</sup> Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Waste Discharge Requirements Order Number R5-2008-0148.

Date: /2 -/6 - 69

							•
	Perk Pit	Standing Water	T.D.S	T.D.S PPM	Treat 125.00- 225.00	Remarks	Oz. of Treatment
BLDG	Yes	No	2200	2200	<u>,                                    </u>		
	r						
850							
054 # 4		,/	567	7/0	93.78	1	6402
851 # 1			) 0	110		wet land/	1 0900
851#2							
			1	9200			Make up 90065 66
801		V :	466	14	96.41		Make up 9006.5 66 Blow-Down, 5/3350
802	<u> </u>			1			
812							
<u> </u>							
809		N	0	A	cers		
		, ,		61		<b>6</b> /	
817		//				¥:- (	
825		Down	FOR	bur	y Repair	<b>)</b> .	
3-3-		0000		/			16.5
826			421	500	8,816		8402.
827 # 1			5/9	500	5.477		6402
827# 2		1	508	500	15 00 15	wet land/	640Z. 640Z.
							Make up
886A							Blow Down
836D							Make up
8300							Blow-Down
865		·				wet land/	
L							
-							
					: <u></u>		
		i				•	

Date: /2 - 9 - 09

	Perk Pit	Standing Water	T.D.S	T.D.S PPM	Treat 125,00- 225.00	Remarks	Oz. of Treatment
BLDG	Yes	No	2200	2200			
850			<u></u>				
851 # 1			599	700	40.05	wetfand/	6402.
851#2							
801			563	800	37.76		Make up 89 93699 Blow Down 5713042
802							
812							
809			Boiler	Raj	prin NO	ACCESS.	
817		V	519	610	17,53		6402.
825			Done	FUR	REPAIN		
826		~	521	500	70,7/		6402.
827 # 1			630	500	18.34		6402.
827# 2		~	690	503	15.13	wet-tand/	6402.
.836A							Make up Blow Down
836D							Make up Blow-Down
865						wetfand/	
						`	

Date: 12-2-09

						·_	12 -
	Perk Pit	Standing Water	T.D.S	T.D.S PPM	Treat 125.00- 225.00	Remarks	Oz. of Treatment
BLDG	Yes	No	2200	2200	120:00 120:00		
850					0.00 -		
851 # 1			724	5000°	5000 #	wet fand/	6402
001#2							
851#2							Make up
801		NO	Ace	१८६२			Blow Down
802							
812							
809		<b>/</b>	SJ-S	900	9.444		6402.
817		✓	1485	1200	1200	B.D. pluggr	6402.
825			Dou		on Repa	-	
826	ہمی	/	!	490			640c.
			643	610	7.199		640
827 # 1							
827# 2			585	800	10.02	wet land/	64.07.
836A					,		Make up Blow Down
						·	Make up
886D							Blow Down
865						wet_land/	
					İ		
							,
<u></u>							
						,	
-							
<u> </u>	<del></del> _	<u> </u>	L	L			

Date: //-18 - 09

BLDG	Perk Pit Yes	Standing Water	T.D.S 2200	T.D.S PPM 2200	Treat 125.00- 225.00	Remarks	Oz. of Treatment
850							
851 # 1		NEW			INSTAllOP		
851#2			Gor	C- C	NE TONE	2	
801					110.10		Make up <u>4950057</u> Blow Down <u>509050</u> /
802							
812							
809			503	700	99.109		6406
817			544	600	10.09		640C
825		Dow	U F	A A	REPAIN		
826		V	493	510	0.00		6402.
827 # 1			566	6/6	37.10		6402.
827# 2			553	600	25.75	wet land/	640.5.
836A					:		Make upBlow Down
836D							Make up Blow Down
							Down Down
865						wet land/	
					, , , , , , , , , , , , , , , , , , , ,		
L	L		L			<u> </u>	<u> </u>

Date: / 1 - 4 - 09

		T.D.S	T.D.S PPM	Treat 125.00- 225.00	Remarks	Oz. of Treatment
Yes	No	2200	2200	<u> </u>		
	-					
	Down For	Crol	is Tou	on Rephec	wet land/	
	/	645	800	25.25		Make up <u>49 / 15 89</u> Blow Down <u>\$26 1439</u>
		632	600	4.542		6402.
		660	510	0.899		6402
	Dow	1 501	r pu	mp Repri	'n	
		618	5/0	5.935		8482
	Dour	FOR	Re	prin		
	V	7/8	200	44.17	wet land/	6402.
		·				Make upBlew Down
						Make up
						Blow Down
					wet land/	
<u>,</u>						
						4.
!						
		Down Fox	Down For Cool.  845  632  660  Down For 618	Down FOR Cust in Town  845 800  632 600  660 510  Down For Du  818 \$10  Down FOR RE	Down For Coolin Towon Rephece  845 800 25.25  1 632 600 4.542  1 660 510 0.899  Down For Dump Reprin  818 5/0 5.935  Down For Deprin	Dan For Coolin Towar Rephedment werlands    645 800 25.25     632 600 4.542     660 510 0.899     Down For Dump Reprin     618 \$10 5.935     Down For Reprin     71/8 900 44.17     Westlands

Date: 16-28-09

	Perk Pit	Standing Water	T.D.S	T.D.S	Treat	Remarks	Oz. of Treatment
BLDG	Yes	No	2200	PPM 2200	125.00- 225.00		
850							
851 # 1		NO	A	ce s	5	wet land/	
851#2							
801		V	619	800	48.33		Make up <u>8898839</u> Blow Down <u>S055279</u>
802							
812							
809		/	601	900	15,62		6402.
817		/	611	600	7,544 Depara		640Z.
825		Down	FUR	punj	s Repair.		
826		/	551	500	12.19		6402.
827 # 1		pour	FOR	PEPAI,	<u> </u>		
827# 2		Down	655 Fox	PEPAI, 650 REDAN	66.27	wettand/	6402.
836A				:			Make up Blow Down
836D							Make up Blew Down
865						wettand/	
			<u></u>				
	<u></u>					· · · · · · · · · · · · · · · · · · ·	

Date: 10-14-09-

		Standing Water	T.D.S	T.D.S PPM	Treat 125.00- 225.00	Remarks	Oz. of Treatment
BLDG	Yes	No	2200	2200	I		T F-W
850				,		By pluggen	FEED Plussed
851 # 1		/	910	2200	0.00	wet land/	Plusser D.OU
851#2		SHUT	DOK	<u>k</u>			
801		ن	948	906	35,27	2 GAls.	Make up <u>888237/</u> Blow Down 230273
802							
812							
809			3/0/	2800	0.0	BOHUGED	64 02.
817			1748	4849	119,11	Aug BD Augges	i i
825			7/0	1100	5.215	FEED	6402
826			206	800	45.62	FEED Plassed	6402.
827 # 1			831	259	000	FEED	6402.
827# 2			/635	995	3,101	wettand/	8401.
836A	<u> </u>						Make up \$\$42397 Blow Down \$6302713
836D							Make up Blow Down
865						wet land/	
				,			
						·	

### Appendix D

Cooling Tower Blow Down Effluent Monitoring Network with Discharges to Percolation Pits (Bldgs. 801, 809, 812, 817A, 826, 827A, and 851) and Septic Systems (Bldgs. 802, 825, 830, 833/835, 834A, and 850)

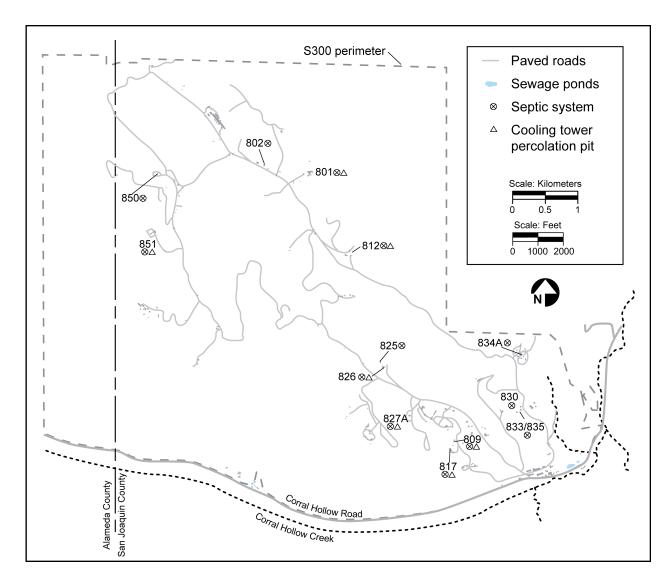


Figure D.1. Location of Site 300 cooling towers.

 $Table \ D.1. \ Site \ 300 \ cooling \ tower \ was tewater \ monitoring \ network \ 2009 \ annual \ anions \ data \ summary.$ 

Building	Well	Date	Sodium (mg/L)	Chloride (mg/L)	Nitrate (as NO3) (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)
B801	3-801ACT01-TW	Apr 29	440	170	2.4	350	0.49
B801	3-801ACT01-TW	Oct 27	400	150	0.60	310	0.67
B809	3-809ACT01-TW	Apr 29	250	93	1.0	200	0.24
B809	3-809ACT01-TW	Oct 27	280	110	< 0.5	230	0.69
B812	3-812AFCT01-TW	Apr 29	300	110	1.5	240	0.34
B817	3-817ACT01-TW	Apr 29	310	110	1.2	240	0.30
B817	3-817ACT01-TW	Oct 27	250	91	< 0.5	200	0.32
B825	3-825ACT01-TW	Apr 29	240	89	1.2	190	0.44
B825	3-825ACT01-TW	Nov 3	220	82	< 0.5	180	0.30
B826	3-826FCT01-TW	Apr 29	260	93	2.0	200	0.46
B826	3-826FCT01-TW	Oct 27	230	84	<0.5	180	0.29
B827	3-827ACT01-TW	Apr 29	240	90	1.9	190	0.42
B827	3-827ACT01-TW	Oct 27	410	140	<0.5	300	0.58
B851	3-851BFCT01-TW	Apr 29	270	100	2.0	210	0.43
B851	3-851BFCT01-TW	Oct 27	280	110	<0.5	220	0.37
B851	3-851BFCT02P-TW	Apr 29	240	89	1.2	180	0.42

Table D.2. Site 300 cooling tower wastewater monitoring network 2009 annual metals analysis data summary.

Analyte	Date	3-801 ACT01- TW	3-809 ACT01- TW	3-812 AFCT01- TW	3-817 ACT01- TW	3-825 ACT01- TW	3-826 FCT01- TW	3-827 ACT01- TW	3-851 BFCT01- TW	3-851 BFCT02P- TW
Aluminum	Date	1 //	1 11	1, 11	1, 11	1 11	1 11	1 //	1 11	1, 1,
(µg/L)	Apr 29	<50	<50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
(MB/ L)	Oct 27	<50	<50	A	<50	-	<50	110	<50	В
	Nov 3	-	-	A	-	< 50	-	-	-	В
Arsenic	11012									
(µg/L)	Apr 29	<2	<2	<2	<2	<2	<2	<2	<2	<2
(1-8)	Oct 27	<2	<2	A	<2	-	<2	<2	<2	В
	Nov 3	_	_	A	_	<2	_	_	-	В
Barium										
(µg/L)	Apr 29	<25	<25	<25	<25	<25	<25	<25	<25	<25
(10)	Oct 27	<25	<25	A	<25	_	<25	<25	<25	В
	Nov 3	-	-	A	-	<25	-	-	-	В
Boron (µg/L)	Apr 29	1900	1100	1300	1300	1000	1100	1000	1100	1000
\	Oct 27	1700	1200	A	1000	_	1000	1700	1200	В
	Nov 3	-	-	A	-	930	-	-	-	В
Cadmium										
(µg/L)	Apr 29	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	Oct 27	< 50	< 50	A	< 50	-	< 50	< 50	< 50	В
	Nov 3	-	-	A	-	< 50	-	-	-	В
Calcium										
(µg/L)	Apr 29	18000	8300	11000	9700	8000	8000	8700	15000	14000
	Oct 27	19000	11000	A	9800	-	9400	16000	22000	В
	Nov 3	-	_	A	-	8200	-	-	-	В
Chromium										
$(\mu g/L)$	Apr 29	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Oct 27	<1	<1	A	<1	-	<1	<1	<1	В
	Nov 3	-	-	A	-	<1	-	-	-	В

A dash (-) denotes analysis not required.

Continued

Table D.2. Site 300 cooling tower wastewater monitoring network 2009 annual metals analysis data summary.

Analyte	Date	3-801 ACT01- TW	3-809 ACT01- TW	3-812 AFCT01- TW	3-817 ACT01- TW	3-825 ACT01- TW	3-826 FCT01- TW	3-827 ACT01- TW	3-851 BFCT01- TW	3-851 BFCT02P- TW
Chromium										
(VI) (μg/L)	Apr 29	<1	<1	<1	<1	<1	<1	<1	<1	<1
	Oct 27	<1	<1	A	<1	-	<1	<1	<1	В
	Nov 3	-	-	A	-	<1	-	-	-	В
Copper										
(µg/L)	Apr 29	3.4	22	14	18	19	6.9	10	250	29 B
	Oct 27	4.3	580	A	15	-	850	7.5	7.2	
	Nov 3	-	-	A	-	42	-	-	-	В
Iron (µg/L)	Apr 29	<100	<100	150	140	<100	600	<100	890	140
	Oct 27	<100	<100	A	<100	-	120	200	140	В
	Nov 3	-	-	A	-	710	-	-	-	В
Lead (µg/L)	Apr 29	<5	<5	<5	<5	<5	<5	<5	30	<5
	Oct 27	<5	<5	A	<5	-	<5	<5	<5	В
	Nov 3	-	-	A	-	45	-	-	-	В
Magnesium (μg/L)	Apr 29	<500	<500	<500	<500	<500	510	<500	<500	<500
	Oct 27	< 500	720	A	< 500	-	< 500	< 500	< 500	В
	Nov 3	-	-	A	-	< 500	-	-	-	В
Manganese (μg/L)	Apr 29	<30	<30	<30	<30	<30	<30	<30	<30	<30
, ,	Oct 27	<30	<30	A	<30	-	<30	<30	<30	В
	Nov 3	-	-	A	-	<30	-	-	-	В
Molybdenum (μg/L)	Apr 29	39	<25	27	26	<25	<25	<25	<25	<25
	Oct 27	36	26	A	<25	_	<25	35	25	В
	Nov 3	-	-	A	-	<25	-	-	-	В

A dash (-) denotes analysis not required.

Continued

Table D.2. Site 300 cooling tower wastewater monitoring network 2009 annual metals analysis data summary.

Analyte	Date	3-801 ACT01- TW	3-809 ACT01- TW	3-812 AFCT01- TW	3-817 ACT01- TW	3-825 ACT01- TW	3-826 FCT01- TW	3-827 ACT01- TW	3-851 BFCT01- TW	3-851 BFCT02P- TW
Nickel (μg/L)	Apr 29	<2	2.2	<2	<2	<2	<2	<2	<2	<2
	Oct 27	<2	<2	A	<2	-	<2	<2	<2	В
	Nov 3	-	-	A	-	6.9	-	-	-	В
Potassium (μg/L)	Apr 29	17000	9400	11000	12000	8900	10000	9100	10000	9000
	Oct 27	14000	10000	A	8800	-	8400	14000	9700	В
	Nov 3	-	-	A	-	8000	-	-	-	В
Selenium (µg/L)	Apr 29	<2	<2	<2	<2	<2	<2	<2	<2	<2
	Oct 27	<2	<2	A	<2	-	<2	<2	<2	В
	Nov 3	-	-	A	-	<2	-	-	-	В
Vanadium (μg/L)	Apr 29	<20	<20	<20	<20	<20	<20	<20	<20	<20
,, ,	Oct 27	<20	<20	A	<20	-	<20	<20	<20	В
	Nov 3	-	-	A	-	<20	-	-	-	В
Zinc (µg/L)	Apr 29	42	35	69	73	100	70	46	570	77
	Oct 27	25	44	A	25	-	76	36	24	В
	Nov 3	-	-	A	-	320	-	-	-	В

A dash (-) denotes analysis not required.

Concluded

A Location 3-812AFCT01-TW was not sampled second semester because the cooling tower was removed from service.

B The cooling tower at Building 851 (3-851BFCT02P-TW) was not sampled during the second semester because the cooling tower was down for repairs and replacement during the time of scheduled sampling events. Due to miscommunication, a resample was inadvertently missed.

Table D.3. Site 300 cooling tower wastewater monitoring network 2009 annual physical characteristics data summary.

Building	Well	Date	pН	Specific Conductance (µmhos/cm)	Total Alkalinity (as CaCO3) (mg/L)	Total dissolved solids (TDS) (mg/L)	Total Hardness (as CaCO3) (mg/L)	Total Phosphorus (as PO4) (mg/L)
B801	3-801ACT01-TW	Apr 29	9.1	1830	390	1400	47	1.0
B801	3-801ACT01-TW	Oct 27	9.1	1770	380	1300	49	1.2
B809	3-809ACT01-TW	Apr 29	8.6	1060	230	760	23	0.49
B809	3-809ACT01-TW	Oct 27	8.8	1270	260	900	31	0.62
B812	3-812AFCT01-TW	Apr 29	8.7	1270	270	910	30	1.3
B817	3-817ACT01-TW	Apr 29	8.7	1300	280	970	26	0.55
B817	3-817ACT01-TW	Oct 27	8.7	1100	230	760	26	1.1
B825	3-825ACT01-TW	Apr 29	8.5	1040	220	760	22	0.42
B825	3-825ACT01-TW	Nov 3	8.2	1020	210	700	22	0.67
B826	3-826FCT01-TW	Apr 29	8.7	1090	240	810	22	0.24
B826	3-826FCT01-TW	Oct 27	8.6	1030	210	710	25	0.15
B827	3-827ACT01-TW	Apr 29	8.5	1050	220	750	23	0.62
B827	3-827ACT01-TW	Oct 27	9.1	1620	360	1200	43	1.2
B851	3-851BFCT01-TW	Apr 29	8.7	1160	250	840	38	0.49
B851	3-851BFCT01-TW	Oct 27	8.9	1250	270	920	56	0.44
B851	3-851BFCT02P-TW	Apr 29	8.6	1030	220	750	35	0.20

 $\begin{tabular}{ll} Table D.4. Site 300 cooling tower was tewater monitoring network 2009 annual QA data summary. \end{tabular}$ 

		3-801ACT01-TW	3-801ACT01-TW	3-809ACT01-TW	3-809ACT01-TW
		Apr 29	Apr 29	Oct 27	Oct 27
Constituent	Units	Routine	Duplicate	Routine	Duplicate
рН	Units	9.1	9.1	8.8	8.9
Specific	μmhos/cm	1830	1830	1270	1300
Conductance					
Aluminum	μg/L	< 50	< 50	< 50	16
Arsenic	μg/L	<2	<2	<2	< 0.5
Barium	μg/L	<25	<25	<25	18
Boron	μg/L	1900	1800	1200	1100
Cadmium	μg/L	< 50	< 50	< 50	< 0.1
Calcium	μg/L	18000	18000	11000	11000
Chromium	μg/L	<1	<1	<1	< 0.5
Chromium (VI)	μg/L	<1	<1	<1	<2
Copper	μg/L	3.4	3.3	580	560
Iron	μg/L	<100	<100	<100	80
Lead	μg/L	<5	<5	<5	0.97
Magnesium	μg/L	< 500	< 500	720	700
Manganese	μg/L	<30	<30	<30	2.4
Molybdenum	μg/L	39	39	26	23
Nickel	μg/L	<2	<2	<2	< 0.5
Potassium	μg/L	17000	17000	10000	16000
Selenium	μg/L	<2	<2	<2	<1
Vanadium	μg/L	<20	<20	<20	<2
Zinc	μg/L	42	42	44	330
Sodium	mg/L	440	440	280	260
Chloride	mg/L	170	160	110	100
Nitrate (as NO3)	mg/L	2.4	2.3	< 0.5	< 0.5
Sulfate	mg/L	350	340	230	210
Fluoride	mg/L	0.49	0.41	0.69	0.18
Total Alk	mg/L	390	390	260	280
(as CaCO3)					
TDS	mg/L	1400	1400	900	860
Total Hardness	mg/L	47	47	31	35
(as CaCO3)					
Total phosphorus	mg/L	1.0	1.0	0.62	<1
(as PO4)					

# FIELD TRACKING FORM Semi-Annual SITE 300 Cooling Towers

S	pecial	Instructions:	Should be sam	pled in early	April	and October.
---	--------	---------------	---------------	---------------	-------	--------------

See back of form for additional access information

LAB	CoC#	Ship It #
BC Labs	47059	
Caltest	47066	

pH meter calibrated on: 10/26/69
Specific Conductance meter calibrated on: 15/56/69

	Sample Date:	10,	127/09
--	--------------	-----	--------

	5			Field Mea	surments	Market St	BC Lab	s
Location Indentifier	Location DUP taken -year/quarter	Arrival/Sample Time	Initials	рН	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 1 x 500ml Poly	** S3WETCHEM 1000mL Poly
3-801ACT01-TW	2009/2nd	0900	US, CF	9.18	176405			
3-809ACT01-TW	2009/4th	10:30	XB.ct	8.79	1308 us			
3-812AFCT01-TW*	2008/4th	OFFLINE						
3-817ACT01-TW		1035	1Ch, cf	7.98	113925		15	
3-825ACT01-TW	wer King	455 KB						Secret 1
3-826FCT01-TW		1005	KBCF	8 63	1047.8			
3-851BFCT01-TW		0900	168 cr	5.93	127345			
3-851BFCT02P-TW		OFFLINE	-	~				
3-827ACT01-TW		1015	XB,CF	9.11	108548		TIS.	
								T. W.
Duplicate of 3-809A	CT01-TW to	be sent to C	altest Labs					
3-B9900-01-TW								

<sup>\*</sup>Allow cooling tower to flush for 30 seconds prior to collecting sample.

\*\*For Caltest (DUP) sample use 1 x Liter Poly + 1 x 500 mL poly w/H2SO4

# **Chain of Custody**

DMT Additional Copies:

EPD: EMAD/PRAD/ESPD Lawrence Livermore National Laboratory P.O. Box 808 L-629 Livermore CA 94551	Document Requester/LLN Organization
Livermore, CA 94551	Organization

Work Authorized By: EPD	
TRR Approver:	
Project Info:	

Access/COC #: 47059	Analytical Lab : BCLABS-BAK	Additional Instructions:
Document Control #: 47059	TAT: 20d	
Requester/LLNL Analyst: A. Grayson	Analytical Lab Log #:	
Organization / Sampler: EPD / brunckhorst2	Project/Network: COOLTOWER	
PCI Project #: 32424	LLNL Acct #:3297-47	
PCI Task #: 1.3.2.2.5.7	Release #: UNICARD	
Fax/Fmail #1: swanson15@llnl.gov	Fax/Email #2:	

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-801ACT01-01-TW	10/27/2009 09:20	TW	Р	1	COOLTOWER	S3ANIONS	ALL	
3-801ACT01-01-TW	10/01/2009 00:00	TW	Р	0	COOLTOWER	S3METALS	ALL	
3-801ACT01-01-TW	10/27/2009 09:20	TW	Р	1	COOLTOWER	S3METALS	TOTAL	
3-801ACT01-01-TW	10/27/2009 09:20	TW	Р	1	COOLTOWER	S3WETCHEM	ALL	
3-809ACT01-01-TW	10/27/2009 10:30	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-809ACT01-01-TW	10/01/2009 00:00	TW	Р	0	COOLTOWER	S3METALS	ALL	
3-809ACT01-01-TW	10/27/2009 10:30	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-809ACT01-01-TW	10/27/2009 10:30	TW	Р	1	COOLTOWER	S3WETCHEM	ALL	
3-817ACT01-01-TW	10/27/2009 10:35	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-817ACT01-01-TW	10/01/2009 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-817ACT01-01-TW	10/27/2009 10:35	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-817ACT01-01-TW	10/27/2009 10:35	TW	Р	1	COOLTOWER	S3WETCHEM	ALL	
3-826FCT01-01-TW	10/27/2009 10:05	TW	Р	1	COOLTOWER	S3ANIONS	ALL	
3-826FCT01-01-TW	10/01/2009 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-826FCT01-01-TW	10/27/2009 10:05	TW	Р	1	COOLTOWER	S3METALS	TOTAL	
3-826FCT01-01-TW	10/27/2009 10:05	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-827ACT01-01-TW	10/27/2009 10:15	TW	Р	1	COOLTOWER	S3ANIONS	ALL	
3-827ACT01-01-TW	10/01/2009 00:00	TW	P	0	COOLTOWER	S3METALS	ALL	
3-827ACT01-01-TW	10/27/2009 10:15	TW	Р	1	COOLTOWER	S3METALS	TOTAL	
3-827ACT01-01-TW	10/27/2009 10:15	TW	Р	1	COOLTOWER	S3WETCHEM	ALL	
3-851BFCT01-01-TW	10/27/2009 09:00	TW	Р	1	COOLTOWER	S3ANIONS	ALL	
3-851BFCT01-01-TW	10/01/2009 00:00	TW	Р	0	COOLTOWER	S3METALS	ALL	
3-851BFCT01-01-TW	10/27/2009 09:00	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-851BFCT01-01-TW	10/27/2009 09:00	TW	Р	1	COOLTOWER	S3WETCHEM	ALL	

Relinguished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 Sal Frecher	LLNL/EPD	10/27/2009		2			
2				3			
3				4			
4				5			

# **Chain of Custody**

EPD: EMAD/PRAD/ESPD	Access/COC #: 47066	Analytical Lab : CALTEST	Additional Instructions:
Lawrence Livermore National Laboratory	Document Control #: 47066	TAT: 20d	
P.O. Box 808 L-629	Requester/LLNL Analyst: A. Grayson	_ Analytical Lab Log #:	
Livermore, CA 94551	Organization / Sampler: EPD / brunckhorst2	Project/Network: COOLTOWER	
Elvermore, CA 94331	PCI Project #: 32424	LLNL Acct #: 3297-47	
Work Authorized By: EPD	PCI Task #: 1.3.2.2.5.7	Release #: UNICARD	
TRR Approver:	Fax/Email #1: swanson15@linl.gov	Fax/Email #2:	
Project Info:	DMT Additional Copies:		
1 10,000 1.1.01			

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-B9900-01-TW	10/27/2009 10:30	TW	Р	0	COOLTOWER	S3METALS_	ALL	
3-B9900-01-TW	10/27/2009 10:30	TW	Р	1	COOLTOWER	S3METALS	TOTAL	
3-B9900-01-TW	10/27/2009 10:30	TW	Р	2	COOLTOWER	S3WETCHEM_	ALL	Pre acidify 500 poly W/H2So4
3-B9900-01-TW	10/27/2009 10:30	TW	P	1	COOLTOWER	S3ANIONS_	ALL	
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Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 rat fromber	LLNL/EPD	10/27/2009		2			
2				3			
3				4			
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# FIELD TRACKING FORM Semi-Annual SITE 300 Cooling Towers

Special Instructions: Should be sampled in early April and October.	
See back of form for additional access information	
*Allow cooling tower to flush for 30 seconds prior to collecting sample.	

LAB	CoC#	Ship It #
BC Labs	47349	130080
Caltest		

pH meter calibrated on: 11/3/09
Specific Conductance meter calibrated on: 11/3/09

Sample Date: 11/3/09

				Field Mea	surments		3C Lab	os	Comments
Location Indentifier	Location DUP taken -year/quarter	Arrival/Sample Time	Initials	PH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 1 x 500ml Poly		Cooling Tower was not operating at the time the Samplewes collected Sample was collected of 185; dual cooling tower water.  Sample was collected from a value cocased near the
3-801ACT01-TW	2009/2nd								a value cocased near the
3-809ACT01-TW	2009/4th								bottom of the Cooling rower.
3-812AFCT01-TW*	2008/4th						14004		
3-817ACT01-TW			WALE OF						
3-825ACT01-TW		0900	KB	8.74	105 7xs	/	/	-	
3-826FCT01-TW									
3-851BFCT01-TW									
3-851BFCT02P-TW									
3-827ACT01-TW									
Duplicate of 3-809A	CT01-TW								
3-B9900-01-TW									

# **Chain of Custody**

EPD: EMAD/PRAD/ESPD	Access/COC #: 47349	Analytical Lab : BCLABS-BAK	Additional Instructions:
Lawrence Livermore National Laboratory	Document Control #: 47349	TAT:20d	
P.O. Box 808 L-629	Requester/LLNL Analyst: A. Grayson	Analytical Lab Log #:	
Livermore, CA 94551	Organization / Sampler: EPD / brunckhorst2	Project/Network: COOLTOWER	
	PCI Project #: 32424	LLNL Acct #:3297-47	
Work Authorized By: EPD	PCI Task #: 1.3.2.2.5.7	Release #: UNICARD	
TRR Approver:	Fax/Email #1:swanson15@llnl.gov	Fax/Email #2:	
Project Info:	DMT Additional Copies:		<u></u>

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-825ACT01-01-TW	11/03/2009 09:00	TW	Р	1	COOLTOWER	S3ANIONS	ALL	
3-825ACT01-01-TW	10/01/2009 00:00	TW	Р	0	COOLTOWER	S3METALS	ALL	
3-825ACT01-01-TW	11/03/2009 09:00	TW	Ρ	1	COOLTOWER	S3METALS_	TOTAL	
3-825ACT01-01-TW	11/03/2009 09:00	TW	Р	1_	COOLTOWER	S3WETCHEM	ALL	
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					-			
		1						

Relinguished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 Let Kuch har	LLNL/EPD	11/3/2009		2			
2				3			
3				4			
4				5			

# Appendix E

Mechanical Equipment Discharge Effluent Monitoring for Buildings 806A and 827A, 827C, 827D, and 827E

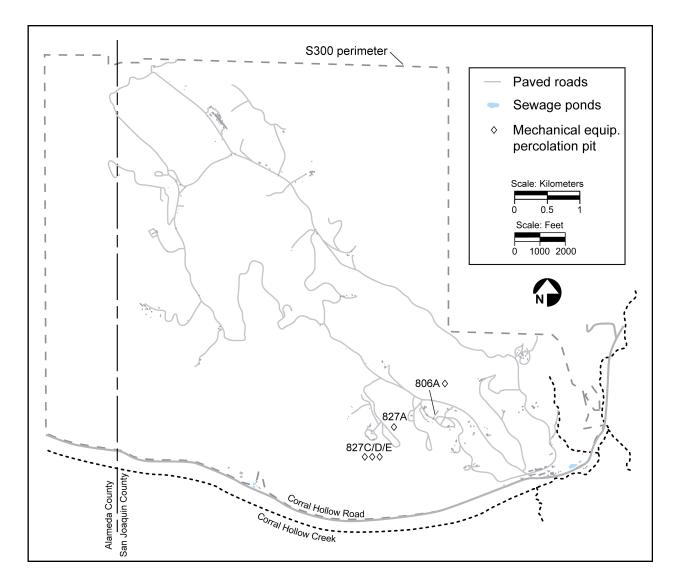


Figure E.1. Location of mechanical equipment wastewater percolation pits.

Table E.1. Site 300 mechanical equipment discharge effluent monitoring 2009 annual anions data summary.

	_	Sulfate	Chloride	Nitrate (as NO3)	Fluoride
Well	Date	(mg/L)	(mg/L)	(mg/L)	(mg/L)
B806A	Feb 3	180	85	< 0.44	0.33
B806A	May 7	180	89	0.55	0.42
B806A	Oct 22	180	83	< 0.5	0.23
B827A	Feb 3	210	100	< 0.44	0.37
B827A	Feb 3 DUP	210	100	< 0.44	0.37
B827A	May 7	240	120	0.67	0.57
B827A	Oct 22	210	99	< 0.5	0.28
B827C	Feb 3	180	84	< 0.44	0.31
B827C	May 7	200	100	< 0.5	0.42
B827C	May 7 DUP	200	100	< 0.5	0.42
B827C	Oct 22	240	110	< 0.5	0.32
B827D	Feb 3	100	45	< 0.44	0.16
B827D	May 7	450	230	<1	1.1
B827D	Oct 22	110	170	< 0.5	0.19
B827D	Oct 22 DUP	240	110	< 0.5	0.29
B827E	Feb 3	190	86	< 0.44	0.33
B827E	May 7	190	94	< 0.5	0.44
B827E	Oct 22	180	85	< 0.5	0.24

Table E.2. Site 300 mechanical equipment discharge effluent monitoring 2009 annual metals data summary.

				B827A		B827C		B827D	
Analyte	Date	B806A	B827A	DUP	B827C	DUP	B827D	DUP	B827E
Aluminum									
(mg/L)	Feb 3	< 0.05	< 0.05	< 0.05	< 0.05	_	< 0.05	-	< 0.05
	May 7	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05
	Oct 22	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	< 0.05
Arsenic									
(mg/L)	Feb 3	< 0.002	< 0.002	< 0.002	< 0.002	-	< 0.002	-	< 0.002
	May 7	< 0.002	< 0.002	-	< 0.002	< 0.002	< 0.002	-	< 0.002
	Oct 22	< 0.002	< 0.002	-	< 0.002	-	< 0.002	< 0.002	< 0.002
Barium									
(mg/L)	Feb 3	< 0.025	< 0.025	< 0.025	< 0.025	-	< 0.025	-	< 0.025
	May 7	< 0.025	< 0.025	-	< 0.025	< 0.025	< 0.025	-	< 0.025
	Oct 22	< 0.025	< 0.025	-	< 0.025	-	< 0.025	< 0.025	< 0.025
Boron									
(mg/L)	Feb 3	0.96	1.1	1.2	0.98	-	0.61	-	1.0
	May 7	0.89	1.1	-	0.95	1.0	2.1	-	0.89
	Oct 22	0.99	1.2	-	1.2	-	0.61	1.2	0.95
Cadmium									
(mg/L)	Feb 3	< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	-	< 0.05
	May 7	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05
	Oct 22	< 0.05	< 0.05	-	< 0.05	-	< 0.05	< 0.05	< 0.05
Chromium									
(mg/L)	Feb 3	< 0.001	< 0.001	< 0.001	< 0.001	-	0.0063	-	< 0.001
	May 7	< 0.001	< 0.001	-	0.0031	0.0029	0.012	-	< 0.001
	Oct 22	< 0.001	< 0.001	-	0.0095	-	0.0022	0.0091	< 0.001
Hexavalent									
Chromium									
(mg/L)	Feb 3	< 0.001	< 0.001	< 0.001	< 0.001	-	< 0.001	-	< 0.001
	May 7	< 0.001	< 0.001	-	< 0.001	< 0.001	< 0.001	-	< 0.001
	Oct 22	< 0.001	< 0.001	-	< 0.001	-	< 0.001	< 0.001	< 0.001
Copper									
(mg/L)	Feb 3	0.016	0.011	0.062	0.010	-	7.7	-	0.015
	May 7	0.097	0.018	-	1.2	1.2	7.9	-	0.018
	Oct 22	0.48	0.016	-	22	-	4.2	19	0.10
Iron									
(mg/L)	Feb 3	< 0.1	< 0.1	< 0.1	0.22	-	2.1	-	0.92
	May 7	< 0.1	< 0.1	-	8.8	9.0	19	-	2.6
	Oct 22	0.13	0.25	-	77	-	2.1	71	0.44
Lead									
(mg/L)	Feb 3	< 0.005	< 0.005	< 0.005	< 0.005	-	0.24	-	< 0.005
	May 7	< 0.005	< 0.005	-	0.016	0.016	0.11	-	< 0.005
	Oct 22	0.011	< 0.005	-	0.16	-	0.045	0.15	< 0.005

A dash (-) denotes analysis not required.

Continued

Table E.2. Site 300 mechanical equipment discharge effluent monitoring 2009 annual metals data summary.

Analyte Manganeses (mg/L)         B806A         B827A         DUP         B827C         DUP         B827D         DUP         B827E           Manganese (mg/L)         Feb 3         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.03         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025         < 0.025					B827A		B827C		B827D	
May 7   0.003   0.03   0.03   0.03   0.03   0.05   0.15   0.038		Date	B806A	B827A	DUP	B827C	DUP	B827D	DUP	B827E
May 7	-									
Molybden (mg/L)         Oct 22         <0.03         <0.03         -         1.5         -         0.037         1.4         <0.03           Molybden (mg/L)         Feb 3         <0.025	(mg/L)				< 0.03				-	
Molybdenum (mg/L)		_			-		0.13		-	0.038
(mg/L)         Feb 3         <0.025         0.031         0.027         <0.025         -         <0.025         -         <0.025         -         <0.025         -         <0.025         0.049         -         <0.025           Nickel (mg/L)         Feb 3         <0.002		Oct 22	< 0.03	< 0.03	-	1.5	-	0.037	1.4	< 0.03
May 7   <0.025   0.025   -   <0.025   0.026   0.049   -   <0.025   0.025   0.025   -   0.034   -   <0.025   0.033   <0.025   0.025   0.033   <0.025   0.034   -   <0.025   0.033   <0.025   0.033   <0.002   <0.002   <0.002   -   0.033   -   <0.002   <0.002   -   0.037   0.031   0.12   -   <0.002   <0.002   <0.002   <0.002   -   0.037   0.031   0.12   -   <0.002   <0.002   <0.002   <0.002   <0.002   -   0.037   0.031   0.12   -   <0.002   <0.002   <0.002   <0.002   <0.002   -   <0.002   -   <0.002   <0.002   <0.002   <0.002   -   <0.002   -   <0.002   -   <0.002   <0.002   -   <0.002   <0.002   -   <0.002   <0.002   -   <0.002   <0.002   -   <0.002   <0.002   -   <0.002   <0.002   -   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   -   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002	Molybdenum									
Nickel (mg/L)         Cot 22         < 0.025         0.025         -         0.034         -         < 0.025         0.033         < 0.025           Nickel (mg/L)         Feb 3         < 0.002	(mg/L)	Feb 3	< 0.025	0.031	0.027	< 0.025	-	< 0.025	-	< 0.025
Nickel (mg/L)         Feb 3 (-0.002)         <0.002         <0.002         -         0.23         -         <0.002           May 7 (0.0033)         <0.002		May 7	< 0.025	0.025	-	< 0.025	0.026	0.049	-	< 0.025
(mg/L)         Feb 3         <0.002         <0.002         <0.002         -         0.23         -         <0.002           May 7         0.0033         <0.002		Oct 22	< 0.025	0.025	-	0.034	-	< 0.025	0.033	< 0.025
May 7   0.0033   <0.002   -   0.037   0.031   0.12   -   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002	Nickel									
Selenium (mg/L)         Oct 22         < 0.002         < 0.002         -         0.21         -         0.057         0.22         < 0.002           Selenium (mg/L)         Feb 3         < 0.002         < 0.002         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         -         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002         < 0.002	(mg/L)	Feb 3	< 0.002	< 0.002	< 0.002	< 0.002	-	0.23	-	< 0.002
Selenium (mg/L)         Feb 3         <0.002         <0.002         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         <0.002         -         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002		May 7	0.0033	< 0.002	-	0.037	0.031	0.12	-	< 0.002
(mg/L)         Feb 3         <0.002         <0.002         <0.002         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         -         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <		Oct 22	< 0.002	< 0.002	-	0.21	-	0.057	0.22	< 0.002
May 7   <0.002   <0.002   -   <0.002   <0.002   -   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.	Selenium									
May 7   <0.002   <0.002   -   <0.002   <0.002   -   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.002   <0.	(mg/L)	Feb 3	< 0.002	< 0.002	< 0.002	< 0.002	_	< 0.002	-	< 0.002
Sodium (mg/L)         Feb 3         220         260         260         220         -         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002         <0.002	<u> </u>	May 7	< 0.002	< 0.002	-	< 0.002	< 0.002	< 0.002	-	< 0.002
Sodium (mg/L)         Feb 3         220         260         260         220         -         150         -         250           May 7         220         280         -         240         250         570         -         240           Oct 22         230         280         -         330         -         230         320         230           Vanadium (mg/L)         Feb 3         <0.02					-				< 0.002	
(mg/L)         Feb 3         220         260         260         220         -         150         -         250           May 7         220         280         -         240         250         570         -         240           Oct 22         230         280         -         330         -         230         320         230           Vanadium (mg/L)         Feb 3         <0.02	Sodium									
May 7         220         280         -         240         250         570         -         240           Vanadium (mg/L)         Feb 3         <0.02         <0.02         <0.02         <0.02         <0.02         -         <0.02         -         <0.02           May 7         <0.02		Feb 3	220	260	260	220	-	150		250
Vanadium (mg/L)         Feb 3         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.03         <0.03         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.05         <0.08         <0.05         <0.08         <0.05         <0.08         <0.08					_		250		_	
Vanadium (mg/L)         Feb 3         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.03         <0.02         <0.03         <0.03		_			_				320	
(mg/L)         Feb 3         <0.02         <0.02         <0.02         <0.02         -         <0.02         -         <0.02         -         <0.02         -         <0.02         -         <0.02         -         <0.02         -         <0.02         -         <0.02         -         <0.02         -         <0.02         -         <0.02         -         <0.02         <0.02         -         <0.02         <0.02         <0.02         -         <0.02         <0.02         <0.02         -         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.024         -         0.27         -         0.035         <0.035         <0.081         <0.02         <0.04         -         0.067         0.072         0.23         -         0.081         <0.052         <0.051         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.052         <0.	Vanadium									
May 7         <0.02         <0.02         -         <0.02         <0.02         -         <0.02         <0.02         -         <0.02         <0.02         -         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.02         <0.024         -         <0.27         -         <0.035           May 7         0.025         0.045         -         0.067         0.072         0.23         -         0.081           Oct 22         <0.02		Feb 3	< 0.02	< 0.02	< 0.02	< 0.02	_	< 0.02	_	< 0.02
Zinc (mg/L)         Feb 3         0.034         0.045         < 0.02         0.024         -         < 0.02         < 0.02         -         < 0.02         -         0.027         -         0.035           May 7         0.025         0.045         -         0.067         0.072         0.23         -         0.081           Oct 22         <0.02	(8,)						< 0.02		_	
Zinc (mg/L)         Feb 3         0.034         0.045         <0.02         0.024         -         0.27         -         0.035           May 7         0.025         0.045         -         0.067         0.072         0.23         -         0.081           Oct 22         <0.02					_		-		< 0.02	
(mg/L)         Feb 3         0.034         0.045         <0.02         0.024         -         0.27         -         0.035           May 7         0.025         0.045         -         0.067         0.072         0.23         -         0.081           Oct 22         <0.02         0.044         -         0.77         -         0.20         0.86         0.052           Calcium (mg/L)         Feb 3         7.8         9.5         9.9         10         -         <0.5         -         6.0           May 7         7.4         10         -         5.9         6.2         0.82         -         9.6           Magnesium (mg/L)         Feb 3         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5         <0.5	Zinc	00022	0.02	0.02		0.02		0.02	0.02	0.02
May 7         0.025         0.045         -         0.067         0.072         0.23         -         0.081           Calcium (mg/L)         Feb 3         7.8         9.5         9.9         10         -         <0.5		Feb 3	0.034	0.045	< 0.02	0.024	_	0.27	_	0.035
Calcium (mg/L)         Feb 3         7.8         9.5         9.9         10         -         <0.5         -         6.0           May 7         7.4         10         -         5.9         6.2         0.82         -         9.6           Oct 22         8.0         12         -         <0.5	()						0.072		_	
Calcium (mg/L)         Feb 3         7.8         9.5         9.9         10         -         <0.5         -         6.0           May 7         7.4         10         -         5.9         6.2         0.82         -         9.6           Oct 22         8.0         12         -         <0.5									0.86	
(mg/L)         Feb 3         7.8         9.5         9.9         10         -         <0.5         -         6.0           May 7         7.4         10         -         5.9         6.2         0.82         -         9.6           Oct 22         8.0         12         -         <0.5	Calcium	00022	0.02	0.011		0.77		0.20	0.00	0.002
May 7         7.4         10         -         5.9         6.2         0.82         -         9.6           Oct 22         8.0         12         -         <0.5		Feb 3	7.8	9.5	9.9	10	_	< 0.5	_	6.0
Oct 22         8.0         12         -         <0.5         -         2.8         <0.5         5.4           Magnesium (mg/L)         Feb 3         <0.5	(8,)						6.2		_	
Magnesium (mg/L)         Feb 3         <0.5         <0.5         <0.5         -         0.54         -         <0.5           May 7         <0.5					_		-		< 0.5	
(mg/L)         Feb 3         <0.5         <0.5         <0.5         -         0.54         -         <0.5           May 7         <0.5	Magnesium	30122	0.0	12		10.0		2.0	10.5	5.1
May 7         <0.5         <0.5         -         <0.5         <0.5         1.6         -         <0.5           Oct 22         <0.5		Feb 3	< 0.5	< 0.5	< 0.5	< 0.5	_	0.54	_	< 0.5
Oct 22         <0.5         <0.5         -         <0.5         -         <0.5         <0.5         <0.5           Potassium (mg/L)         Feb 3         7.9         9.0         9.3         7.3         -         5.3         -         6.8           May 7         8.1         10         -         9.0         9.4         23         -         8.1	(1116/12)						< 0.5		_	
Potassium (mg/L)         Feb 3         7.9         9.0         9.3         7.3         -         5.3         -         6.8           May 7         8.1         10         -         9.0         9.4         23         -         8.1										
(mg/L)     Feb 3     7.9     9.0     9.3     7.3     -     5.3     -     6.8       May 7     8.1     10     -     9.0     9.4     23     -     8.1	Potassium	00022	.0.0			10.0		.0.0	.0.0	10.0
May 7 8.1 10 - 9.0 9.4 23 - 8.1		Feb 3	7 9	9.0	93	7 3	_	5 3	_	6.8
	(1115/12)									
		Oct 22	8.2	10	-	16	-	3.0	15	6.0

A dash (-) denotes analysis not required.

Concluded

Table E.3. Site 300 mechanical equipment discharge effluent monitoring 2009 annual physical data.

Well	Date	Specific Conductance (µmhos/cm)	Total dissolved solids (mg/L)	Total Alkalinity (as CaCO3) (mg/L)	Total Phosphorus (as PO4) (mg/L)	рН	Total Hardness (as CaCO3) (mg/L)
B806A	Feb 3	980	680	210	< 0.15	8.2	21
B806A	May 7	1000	720	210	0.23	8.2	20
B806A	Oct 22	1000	690	210	< 0.15	8.2	21
B827A	Feb 3	1100	790	240	0.47	8.7	25
B827A	Feb 3 DUP	1100	790	240	0.55	8.6	26
B827A	May 7	1400	960	270	0.53	8.7	27
B827A	Oct 22	1200	780	250	0.47	8.7	30
B827C	Feb 3	950	660	200	< 0.15	9.3	27
B827C	May 7	1100	830	230	1.8	9.6	15
B827C	May 7 DUP	1200	700	230	1.8	9.6	16
B827C	Oct 22	1400	910	300	4.6	10	1.6
B827D	Feb 3	590	400	130	2.2	7.2	2.8
B827D	May 7	2500	1800	520	9.8	10	8.8
B827D	Oct 22	1100	640	150	2.3	7.4	7.5
B827D	Oct 22 DUP	1400	880	300	4.5	10	1.4
B827E	Feb 3	1000	690	220	< 0.15	8.5	16
B827E	May 7	1100	790	240	< 0.15	9.0	24
B827E	Oct 22	1000	650	200	< 0.15	9.1	14

# FIELD TRACKING FORM Semi-Annual Site 300 Mechanical Equipment Room Discharge

Special Instructions: Should be sampled in early April and October.

See back of form for additional access information

\*For Caltest (DUP) sample use 1 x Liter Poly + 1 x 500 mL poly w/H2SO4

LAB	CoC#	Ship It #
BC Labs	47067	
Caltest		

pH meter calibrated on: 10/21/09
Specific Conductance meter calibrated on: 10/21/09

Sample Date: 10/22/09

			Field	Meas		3C Lab	S	Comments	
Location Indentifier	Arrival/Sample Time	Initials	PH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 1 x 500ml Poly	* S3WETCHEM 1000mL Poly	8270 Boiler not vocaning 8270 Boiler No. 8493E01 Rust colored water coming from boiler	RUKGED.  MAY-09 UN PLEPAIR.
3-B827A-01-OW			8.40	1085AS					
3-B827C-01-OW	1020		14.28	141545					
3-B827D-01-OW	1000		7.55	109/15					
3-B827E-01-OW	0940		9.04	1047.63					
3-B806A-01-OW	0920		8.49	1083 45		7-			
Duplicate of 3-	8827 <b>p</b> -ow								
3-B9900-OW	1020								

Copy to Analyst, Allen Grayson.

Copy of CoC given to TRR

# **Chain of Custody**

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	PCI Project #:32424	LLNL Acct #:3297-90
Work Authorized By: EPD	PCI Task #: 1.3.2.2.5.7	Release #: UNICARD
TRR Approver:	Fax/Email #1: swanson15@ilni.gov	Fax/Email #2:
Project Info:	DMT Additional Copies:	

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
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3-B806A-01-OW	10/22/2009 09:20	AQ	Р	1_	MECHEQUIPM	S3WETCHEM	ALL	
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3-B827C-01-OW	10/22/2009 10:20	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	
3-B827D-01-OW	10/22/2009 10:00	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B827D-01-OW	10/22/2009 10:00	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
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3-B827E-01-OW	10/22/2009 09:40	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B827E-01-OW	10/22/2009 09:40	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B827E-01-OW	10/22/2009 09:40	AQ	Р	1	MECHEQUIPM	S3METALS	TOTAL	
3-B827E-01-OW	10/22/2009 09:40	AQ	Р	1	MECHEQUIPM	S3WETCHEM	ALL	
3-B9900-01-OW	10/22/2009 10:20	AQ	Р	1	SPECIAL	S3ANIONS	ALL	
3-B9900-01-OW	10/22/2009 10:20	AQ	Р	1	SPECIAL	S3METALS	ALL	
3-B9900-01-OW	10/22/2009 10:20	AQ	Р	0	SPECIAL	S3METALS	TOTAL	
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Additional Instructions:

Analytical Lab : BCLABS-BAK



# Environmental Protection Department, Lawrence Livermore National Laboratory P.O. Box 808, L-627, Livermore, California 94551

# What This Is

Lawrence Livermore National Laboratory (LLNL)

Experimental Test Site (Site 300) Compliance Monitoring Report for Waste Discharge Requirements (WDR) Order No. R5-2008-0148

Annual/Second Semester Report 2009

## 1. Driver, purpose and required content

This required monitoring report presents results of wastewater and ground water analyses permitted by WDR R5-2008-0148 that was adopted in September 2008. This report meets the semiannual and annual reporting requirements and monitoring summary required in the WDR Monitoring and Reporting Program (MRP). The monitoring networks covered under the terms and conditions of this Permit include the sewage evaporation and percolation ponds, septic systems, cooling tower discharges and other low-threat discharges located at Site 300. This report summarizes (first and second semester) 2009 monitoring data.

### 2. Issues and commitments made in the document

Data are presented in both graphical and tabular form to indicate compliance with the terms and conditions of the WDR. Monitoring data show all 2009 analytical results for discharges from the prescribed monitoring networks were in compliance with WDR conditions.

This report is required to be prepared under the supervision of a California Professional Geologist or Professional Engineer and must be signed by the professional. More details of all sampling activities, including field-sampling logs, ground water contour maps, and details of well construction are new requirements under this revised MRP No. R5-2008-0148.

Following detailed discussion with EPD staff, Susan Timm, of the CVRWQCB (now retired from the CVRWQCB) issued a revised MRP under this Permit. This revision takes into account various issues that developed when implementing these networks. The CVRWQCB is currently in the process of re-issuing the WDR and is expected to finalize the WDR during the March 2010 CVRWQCB Executive Board meeting. All permit conditions were met, except for missing third and fourth quarter percolation pit inspections at B806. This occurred due to a scheduling error, which has been corrected. The cooling tower at Building 851 (3-851BFCT02P-TW) was not sampled during the second semester because the cooling tower was down for repairs and replacement during the time of scheduled sampling events. Due to miscommunication, a resample was inadvertently missed.

### 3. Due date

This report is due at the Central Valley Regional Water Quality Control Board on March 1, 2010, to satisfy the requirements of No. R5-2008-0148.

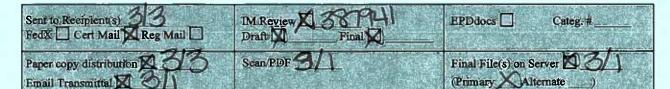
### 4. Technical reviewers

This document was sent for technical review to Zafer Demir, Don MacQueen, and Karen Folks. The comments received were incorporated.

### 5. Name and phone number of who to contact with questions

If you have any questions about this letter, please contact either Allen Grayson at 2-2300 or Karen Folks at x2-2367.

Action Item(s)  ES&H #	Document ID # PRAD10:047
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LLNL Experimental Test Site 300, Annual/Second Semes Monitoring Report for Waste Discharge Requirements R	_
Document Name	
Ms. Kathryn Dominic, Central Valley Regional Water Qu	ality Control Board
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Richard Blake, Water Resources Program Leader	Date Signed
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Sav Mancieri, Division Leader	Date Signed
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Ray Chin, S-300 P.E. Maintenance & Operations	Date Signed
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Leslie Ferry, S-300 Restoration Project Leader (ERD)	Date Signed
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John E. Scott, S-300 Site Manager	Date Signed
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